SERVICE QUALITY IN NURSING HOMES

A construct, measurement and performance model to increase client focus

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ABSTRACT

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This thesis is concerned with the quality of care for the elderly in nursing homes, responding to a critical social and demographic imperative. The aim of this study is to provide a service quality construct for nursing homes to increase client focus and satisfaction. The research is underpinned by the service quality literature. It utilises the SERVQUAL construct to explore the nature of service quality in nursing homes through semi-structured interviews with nursing home residents and resident's families. A service quality scale was constructed comprising six dimensions and 27 scale items capturing service delivery in nursing homes. This scale was purified through a survey of residents and family members (n=263). Through exploratory factor analysis, six importance and four experience factors were identified. Regression analysis was used to identify relationships between the factors, service quality and satisfaction. The results indicate that importance does not predict perceived quality, though experience of responsiveness and hospitality and courtesy and personal approach are indicators of service quality. Furthermore, quality emerges as a predictor of satisfaction. From these outcomes, a service quality construct was developed which comprises of service marketing and service quality dimensions. This thesis contributes to the construction of the concept of service quality in nursing

homes, its dimensionality and thus the precursors of satisfaction. These have considerable implications for the management of nursing home services.

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When I worked as a nursing student in a nursing home, the moment I sat on the bed to talk with the residents, colleagues started shouting that I had to carry on “working”. Is talking with a resident not “work”? I remember that during washing a resident we were talking about her children and grandchildren and how she felt blessed with them. Twenty minutes after I had finished dressing her, she died. I hope I gave her some comfort by listening and talking to her.

This study is about these aspects of life. Vulnerable people and their families who feared going into a nursing home and are then confronted with a way of organising the service delivery that directs their daily life instead of supporting them in living their own life.

I hope that this study has contributed a little bit towards a better quality of service delivery in nursing homes.

This study has felt like one big journey. A journey that has taken me over hills and through valleys from where I acquired new wonderful views that kept me going on. As a management consultant and chairman of the European Association of Homes and Service for the Ageing (EAHSA) I had the opportunity to visit nursing homes in the Netherlands and throughout the world. Every visit motivated me to complete this study because I believe that although there is the willingness to do so there is still a lack of focus on the client and family perspective in this sector. I hope that the results of this study will help the management of nursing homes and other institutions to increase that focus.

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Let’s move forward to make this work!

Hank, October 2012

CONTENTS

1 INTRODUCTION

This chapter describes the motivation and relevance of this study and gives an overview of the structure of this thesis.

1.1 Motivation for this study

A personal experience led to the subject of this thesis. When I was working as an interim CEO for an organisation that runs several nursing homes I was confronted with a situation that was considered by me as bad quality. As an interim CEO I was waiting for a meeting in one of the nursing homes of my organisation. To kill the waiting time (managers were on their way to the meeting), I waited in the reception area, to experience the atmosphere of the entrance of the nursing home. While I was waiting, the sliding doors opened and a lady came in accompanied by a man and a woman, with several bags and suitcases. It was obvious that this lady was moving into the nursing home. These three people approached the reception desk. Behind the reception desk, the receptionist was on the telephone and did not look up when the three were standing in front of her desk. A second person was copying papers and stood with her back to the three people. The three people waited for about four minutes, nothing happened. The receptionist ended her phone call, looked up and said: “Yes ?”. The man bent towards the receptionist and said: “my mother is coming to live here”. She said to him: “what is her name? I will call the nursing unit. Wait over there and someone will pick you up” and waved them away.

Can you imagine what it would be like to be treated in this way when you are in the middle of a dramatic life event like moving into a nursing home? This event was for me, who had just started my DBA-program, the motivation to focus on service quality in nursing homes. The management of that particular nursing home, where I was ultimately responsible in my role as a CEO, did not understand how to align the service delivery (the reception) to the situation of the customer (the resident who is moving into the nursing home). Therefore, furnishing the subject of this study, service quality in nursing homes, needs the attention of management to increase CEO's satisfaction and ultimately residents' satisfaction.

In this study, a management topic, 'service quality' is the focus in the context of the nursing home sector that delivers many services to ageing customers. From this perspective this study can be considered as business research: "academic research on topics relating to questions relevant to the field of business and management" (Bryman and Bell, 2007, p. xxvii). Therefore this study can be characterised as "business research in ageing".

But what is the difference with ageing research? Ageing research is broad and is conducted in a variety of academic disciplines. Ageing can be viewed from the (bio-)medical sciences to study the effect of ageing on the human body. However, ageing research can also be viewed from the social sciences to study for example, how a social support structure changes when a person becomes older, or a combination of both when loneliness is related to the possibility that a person gets Alzheimers. Ageing research "touches on

subjects including age-related diseases, determinants of healthy ageing, ageing and economic development, changing family structures, social integration and participation, work and retirement, economic security and pensions, and quality of life" (CARDI, 2010, p.6).

Business research as an academic research has the same methodological reference and uses the same array of research methods as other types of research. Therefore there are no prior specific methodological implications by the subject and type of this study. The classification of "business research" is more related to the scope of the research domain, organisations and management.

1.2 Relevance of this study

Concerns about quality of nursing homes

The personal experience illustrates the state of the nursing home sector and is not isolated: there are concerns about the quality of nursing homes. Many programmes are initiated in several countries to increase the quality of care and satisfaction of residents and their families.

In the Netherlands the government decided in 2005, after publication in the press about abuses in nursing homes, to intensify the inspections in nursing homes by the Health Care Inspection (IGZ). During 2005 and 2006, 640 nursing homes were visited and 600 needed an improvement plan, which was executed by most of them in 2008 (IGZ, 2008).

In the United States the US Centres for Medicare and Medicaid Services (CMS) started in 2012 the Nursing Home Action Plan to "improve the

individual experience of care, improving the health of populations and reducing the per capita cost of care for population" (CMS, 2012).

In the United Kingdom the Royal College of Nursing (RCN) has published a research report that reflects the experiences of frontline nursing staff in care homes between 2004 and 2010. The findings were worrying: inappropriate admissions, lack of equipment, inadequate staffing levels and an inappropriate mix of skills to meet increasing nursing and care needs of residents.

This is an important subject in a world that is confronted with ageing societies that leads to an increase in the need of nursing home care.

Ageing societies and increase of care needs

We live in an ageing world. Worldwide, societies are ageing and the proportion of people over 60 in the world population will increase from 10.8% in 2009 to 21.9% in 2050 (United Nations, 2009). The increase in developed countries is less but the proportion of people over 60 in these countries is much higher: 21.4% in 2009 to 32.6% in 2050.

These ageing societies will be accompanied by an increase of needs in long term care.

Three general theories are developed on possible trends in old-age disability in a context of a rising life expectancy (Lafortune, et al., 2007, p.16): the first theory expects that a higher life expectancy will be accompanied by an "expansion of morbidity/disability", due to improved medical care which leads to higher survival rates of the sick and an increasing disability in the last

stage of a person's life. The second theory is named a "compression of morbidity/disability". The increasing life expectancy will be linked to a shorter period of illness and disability at the end of life, as a result of healthy living attitudes by individuals and promoted by organisations and governments. The third theory is the "dynamic equilibrium". Increasing longevity will lead in this scenario, to an "expansion of *light* morbidity and disability, but with a reduction of *severe* morbidity and disability, due to improvements in health care and the increased use of assistive and devices".

However, there is a lack of comparable data on the incidence of diseases in the last stages of a person's life which makes generalisation and acceptance of any of those issues difficult (Huber, et al., 2009, p.32). The United Nations have calculated that the world's dependency ratio (a commonly used measure of potential support needs) will double between 1950 and 2050. In developed countries it will even rise by 63% due to ageing societies which means that the share of old persons vs. children in the dependency ratio becomes equal (United Nations, 2009, p.18-19).

These developments also have their impact in the Netherlands where this study is carried out. The expectation in the Netherlands is that the use of long term care will increase between 2005 and 2030 by 1.2% each year and that the number of residents in long term care for the elderly will grow by 1.4% (Woittiez, et al., 2009, p.10).

1.3 Characteristics of the nursing home sector in the Netherlands

Facts on nursing homes in the Netherlands

In the Netherlands in 2008 there were 479 nursing homes (Deuning, 2009) with a total capacity of 70.946 beds (ActiZ, 2011). These nursing homes provide rehabilitation care, long term physical care and psycho-geriatric care. The care is provided by staff that consists of nurses, nurse aids and care assistants, nursing home physicians, physio, speech and occupational therapists and psychologists (Hoek, et al., 2003, p.244). The physicians are employed by the nursing home.

Care homes also provide nursing home care in a special unit. The service delivery[1] of (para-)medical services must be supervised by a nursing home physician.

The nursing homes are private non-profit entities that are financed by a public insurance the so-called Exceptional Medical Expenses Act (AWBZ) that is based on tax premiums. The AWBZ is executed by health insurance companies who contract nursing homes for AWBZ based nursing home care. These insurance companies are the intermediaries between the government and the nursing homes in financing.

Residents can qualify for a nursing home stay by a system that is called the Zorgzwaarte Pakketten (ZZP), in English, the Care Intensity Package (Bureau HHM, 2010). These ZZP scores range from 1 to 10. For this study the ZZP 5 (dementia nursing home care) and ZZP 6 (physical nursing home care) are relevant.

[1] In this thesis the terms services and service delivery include care and care delivery.

ZZP 5 is described as a package for clients who need intensive counselling and care in a protective living environment because of severe dementia problems. These clients are considered as almost completely dependable (p.12) .

ZZP 6 is described as a package for clients who need counselling, intensive support and nursing in a protective living environment regularly during the day, due to severe somatic problems (p.13).

Most of the residents move to a nursing home because of cognitive disorders like dementia (De Klerk, 2011, p.28).

Quality assurance in nursing home care in the Netherlands

Quality control of the services and the service delivery is done by the Dutch Health Care Inspection. The sector itself tries to regulate the quality of services by a system of a so called HKZ accreditation. Accredited nursing homes have to have the quality of their services checked periodically, by an independent auditor. This independent auditor uses the Consumer Quality Index (CQI) which is approved by HKZ.

Discussions around the CQI concern the length of the questionnaire and the ability of patients to judge the quality of care (Rademakers, et al., 2008).

Additional quality checks are done by the consumer organisations like Cliënt en Kwaliteit (Client and Quality).

Although in the Netherlands most of the nursing homes are certified based on a functioning quality system as HKZ, it can be questioned if the existing quality systems are focusing on customer satisfaction. There is little empirical

evidence that quality systems are affecting resident satisfaction in nursing homes (Wagner, et al., 2001).

This is confirmed by a research that was carried out by a consumer quality organisation into long term care, that showed that no quality improvement in nursing home care in the Netherlands was experienced by the families of nursing home residents, between 2004 and 2006 (Stichting Cliënt en Kwaliteit, 2007).

Du Moulin, et al. (2010) studied different quality systems in ten different countries and found that the quality focus in the Netherlands is on outcome indicators and hardly on process indicators. Outcome indicators are defined as “changes in population and individuals that can be attributed to health care”. Process indicators relate to “activities that constitute health care” (p.288), including patient satisfaction.

Quality indicators in the Netherlands system are related to care safety (physical restraints and falls), mental well–being (depression), satisfaction and experiences of residents and family. A closer look at the satisfaction and experience indicators demonstrate that these are mostly outcome indicators based on a professional reference. The outcome indicators are care (treatment/)life plan, communication and information, physical well-being, care-related safety, domestic and living conditions, participation and social handiness, mental well-being, safety living/residence, sufficient and competent staff and coherence in care (p.291).

Need for a shift to customer orientation and satisfaction

Long term care in the Netherlands is run by private non-profit entities and is mostly public funded. The costs for long term care in the Netherlands will grow between 2009 and 2030 every year by 4.1% (Eggink, et al., 2012, p.12). This increase will lead to a larger share of public resources in long term care. This has many political implications in the sense that the financial coverage of long term care from public sources is shrinking (SER, 2008). Users of long term care, especially elderly care, must pay more out of their own pockets. This leads to more of a consumer position of users of long term care because they have to pay for these services by themselves and expect something in return.

The so-called baby boom generation future residents of nursing homes already have a more consumer attitude and want, if possible, to live in a nursing home that connects to their individual needs and lifestyle in which the focus is on quality of life instead of quality of care (Roes, 2008, p.35).

This means that the nursing home sector in the Netherlands needs to develop to a more consumer or client oriented sector in order to adjust their offer to individual needs and to put customer satisfaction in focus.

Customer satisfaction with services is a result of the expectations of customers and the perceived quality of the service (Douglas and Connor 2003; Grönroos, 1984). Grönroos (p.37) defines perceived quality of the service as “post-consumption evaluation of the service quality which he has experienced”.

Bebko (2000, p.19) states that it is important for the provider to define adequately what service will be delivered to the customer, so that the customer can develop expectations about the nursing home services. These expectations are influencing the customer satisfaction about the perceived quality of services (Santos and Boote, 2003).

To improve the customer (resident) satisfaction, the health care industry in general and the nursing home industry in particular, have to give more focus to the relationship between customer satisfaction and customer expectations. The development of a branding strategy is seen as a future task for the nursing home sector in the Netherlands (Kennedie, 2005; Van Leeuwen, 2006).

This means that with the need of more customer orientation in the nursing home sector and the current focus on outcome quality indicators, quality measurement instruments should be more focused on the resident and family perspective and the delivery of nursing home services to increase satisfaction.

Therefore this study focuses on the quality of nursing home service delivery from the resident and family perspective.

1.4 Aim and objectives of this study

The previous paragraphs described the need for more customer and family focus in the delivery of nursing home services to increase satisfaction about nursing home services and to respond to the changing needs of the future generations of nursing home residents.

Aim of this study

The aim of this study is to provide a validated service quality construct for nursing home managers to improve resident focus and to increase resident and family satisfaction with the delivery of services in nursing homes.

Objectives of this study

The objectives are directly derived from the aim of this study as described above.

- To establish the dimensionality and develop scale items for service quality in nursing homes
- To explore disconfirmation as the foundation for perceived service quality.
- To understand the role of perceived service quality as a predictor for resident satisfaction.

The overall aim will lead to a model to help managers improve resident focus and to increase resident and family satisfaction with the delivery of services in nursing homes.

The first objective concerns the development of a ‘service quality construct’ that captures all aspects of nursing home service delivery, based on established service quality constructs. Nursing homes provide an array of services to their residents. It is important that the service quality construct that forms the foundation for an instrument to increase resident focus, is based on customer needs. Scholars have developed several well established service quality constructs. This study applies a current model which is adjusted to the nursing home context. That means that service quality constructs are understood in the context of a nursing home.

The second objective explores customer expectations and service delivery as the foundation for perceived service quality. To increase a resident focus it is necessary to investigate nursing home residents’ quality reference by describing residents and family expectations about and experiences with the service delivery.

The third objective explores the relationship of perceived service quality as a predictor for resident satisfaction, and considers if well-perceived service quality leads to higher customer satisfaction.

2 QUALITY AND SERVICE QUALITY: THE EXTANT RESEARCH

This chapter considers the extant research on service quality and goes on to locate the issues of service quality in care. First sections 2.1 to 2.3 address the nature of quality, the way the first quality conceptualisations have developed and how quality can be defined. Sections 2.4 to 2.9. describe the development of service quality thinking, constructs and service quality research. Sections 2.10 presents the way in which constructs of service quality can be applied to health care. After the summary in section 2.11, conclusions are drawn from the literature review in section 2.12. In section 2.13 the fundamentals of the nursing home sector are described that have to be taken into account when service quality constructs are applied to the nursing home sector. Finally, with these conclusions, the objectives of this study are more specified and a conceptual model is constructed in section 2.14. Based on the outcome of the literature review, the objectives are reformulated in section 2.15.

This literature review explores the field of quality, service quality constructs, service quality research and the application of service quality constructs in health care and the nursing home sector.

Different from in the United Kingdom, the nursing home sector in the Netherlands is greatly part of the health care sector and not of the social care sector. Therefore a review of applications of service quality constructs in health care is relevant for this study.

The purposes of this literature review are: the identification of an established service quality construct as a reference model for this study; knowledge

about the relationship between customer expectations, perceived service quality and service delivery; insight into the relationship between perceived service quality and customer satisfaction. The outcomes of this literature review inform the objectives of this study more specifically and reinforces the initial conceptualisation in this study.

2.1 Steps in the literature review

The literature review's function is to make the general formulated objectives more specific and concrete, to guide this research towards a more specific path. The results of the literature review have to lead to a usable service quality construct for nursing homes; give notion about the specific circumstances of service delivery in a nursing home, and give input into the construct of a conceptual model for this study.

Literature about service quality was investigated by finding journal articles by on-line sources like Proquest and Emerald by wording that started with general words like "quality" and "service quality" and became more specific after reading the initial literature. Also books from influential scholars were studied like Grönroos, Gummesson and Parasuraman. It became evident that to understand the construct of service quality, the history of quality thinking had to be studied.

The next step was to find the debates and standpoints about the service quality conceptualisations to develop a standpoint about the usability of service quality conceptualisations for this study. Results from that analysis concern the dynamic nature of expectations and the inclusion of the service

outcome and the physical environment. Also the validity of the disconfirmation paradigm as the foundation of a service quality construct was questioned as was the distinction between perceived service quality and customer satisfaction. To move ahead a decision had to be taken about these issues. First, expectations are an important issue in this study, and measuring expectations including their dynamics, gives more insight into the perspective of residents in nursing homes. Secondly, disconfirmation is still an important paradigm in service quality research so will be included in this study. Finally, perceived service quality and customer satisfaction are seen as distinct constructs to keep the explorative character of this study as wide as possible. Based on these premises the SERVQUAL conceptualisation looked most promising as a reference model for this study.

The next step was a further step in deduction by reviewing the literature about the application of SERVQUAL in health care in general, and nursing homes in particular. The final step in the literature review was to identify the nature of the nursing home context that can influence the service quality construct, but also the methodological and ethical implications.

2.2 The origins and constructions of quality

Quality is a construction that already existed in ancient times. Craftsmen were executing the whole manufacturing process: from the beginning to the completed product. In the guilds, where these craftsmen were organised, the quality of the products was examined by their colleagues (Greif, et al., 1994).

The Industrial Revolution started in the 18th century. Eli Whitney was the first person to systemise the manufacturing process by inventing the first cotton engine that separated the seeds from the cotton. He also invented the musket manufacturing system that worked with interchangeable parts (Woodbury, 1960). The result was a manufacturing process in which different people were involved to produce a single product. A system of checks and balances was set up to ensure that the product was working properly.

Frederick Taylor introduced in the beginning of the 1900's, the Scientific Management Method by linking the manufacturing process to productivity. This led to an increased productivity per worker and the increased quality of a product.

The Ford car company succeeded first in making a reliable product (T-Ford) in large numbers based on scientific management principles (Krugman, 1991). Quality was defined by the Ford company. This is reflected by the famous phrase of its chairman Henry Ford: "Any customer can have a car painted any colour that he wants as long as it is black".

The next step was to develop quality control systems. The use of statistical methods was introduced to calculate rates of failure. The first control chart was introduced in 1924 at a factory in Cicero, Illinois by Shewhart (Best, 2006).

The use of the scientific management approach increased in World War II. The need for fast delivery of reliable tanks, planes and weapons by the war industry became a key priority. The products of the aviation and tank manufacturers couldn't fail on the battle field and had also to be delivered

fast when the army and air force needed them. The use of quality control systems had to guarantee reliable products in a defined delivery time.

The end of World War II marked a new phase. In an attempt to restore the nation's economy Japanese manufacturers applied the Scientific Management approach in their manufacturing industry.

The principles of Scientific Management were taken to Japan by dr. Deming who exchanged his ideas with Japanese engineers. According to Deming's philosophy, increased quality leads to increased productivity, which leads to improved competitiveness (Krüger, 2001). The Deming Quality Circles were developed as a tool for quality control and are based upon the Plan-Do-Check-Act cycles that were originated by Shewhart (Best, 2006, p.142).The Japanese approach was characterised by an integral approach: along with a statistical approach. All aspects of the factory were included: the manufacturing process, the working environment, the workers and the managers. Deming and his colleague Juran took the results of their study back to the United States and helped to implement the Japanese techniques into the American manufacturing industry.

In Deming's definition of quality the user perspective was introduced: "Good quality means a predictable degree of uniformity and dependability with a quality standard suited to the customer" (Chandrupatla, 2009, p.2). The next step in this perspective is to identify the customer requirements.

Juran also introduced the consumers interest in his definition of quality next to the manufacturers perspective. Juran's definition of quality: "quality is fitness for use" contains two dimensions: meeting the customer requirements

(fitness for use) and no deficiencies (quality). The challenge in this definition is to translate the customer's requirements into quality standards for the manufacturer (Krüger, 2001).

The work of Deming and Juran was the starting point for the development of quality definitions and conceptualised quality systems.

2.3 Approaches to define quality

Different approaches for defining quality have been developed. Garvin (1984) was the first one to develop a comprehensive model to classify the different quality definitions. In his opinion quality needed to be understood before it could be managed. His work is seen as a milestone in categorising the different definitions of quality. Garvin distinguished five approaches: the transcendent approach of philosophy, the product-based approach of economics, the user-based approach of economics, marketing and operations management, the manufacturing-based approach and the value-based approach of operations management (pp.25-28).

In *the transcendent approach of philosophy,* defining quality is not precise but has to be recognised through experience. It refers to the "platonic form", a term that cannot be defined.

On the other end of the scale in *the product-based approach,* quality can be defined as a precise and measurable variable. Differences in quality are reflected by differences in ingredients or attributes of a product. In this

approach a hierarchical ranking of quality can be defined. This approach was the first to appear in literature regarding quality management.

The user-based approach refers to a quality concept that is defined by the user, a highly subjective approach of defining quality. Garvin identifies two major problems in this approach: firstly, how to aggregate the individual preferences into a usable definition of quality for the manufacturer, and secondly what is the optimum quality based on individual preference to the highest satisfaction (p.27)? The first problem can be solved by a consensus of views of different users. The second problem has more difficulties: the highest quality product does not always cause the highest satisfaction. This supports a subjective interpretation of quality. But other, more external factors, like economic circumstances also influence the interpretation of quality. Garvin shows in this respect the example of durability. Durability is seen as an aspect of high quality. In the early nineteenth century durable goods were for the poor because only wealthy people could afford products that needed frequent replacement (p.27).

The manufacturing-based approach is the opposite of the user-based approach and focuses on the manufacturer's perspective. In this view the primary concern focuses on the engineering and manufacturing process. Quality is defined as the product meeting all requirements. The quote of Henry Ford, mentioned earlier, is a representation of this approach.

Finally, *the value-based approach* defines quality in terms of costs and prices. In this view the manufacturer produces a quality product for an acceptable price. Garvin states that this approach becomes more prevalent (p.28). The challenge in this approach is that it is based on two related but distinct concepts. Quality is defined as a matter of excellence and as a matter of worth: affordable excellence. This hybrid character makes it difficult to define and to apply in practice.

For the subject of this study, quality in nursing homes, the transcendent and user approach are particularly pertinent, because the moving to and living in a nursing home is a new experience in someone's life and is very dependent on the resident's individual situation.

2.4 Development of service quality constructions

The development of service quality constructs was initiated in the marketing discipline. After quality control was implemented in the manufacturing process, the next challenge was to convince consumers to buy particular goods because they met their needs. So the next focus was to sell the manufactured goods which marks the start of the marketing discipline (Vargo and Lush, 2004).

But next to commodities, services also were present in the market. These services like banking, retail, accounting and transportation were only seen as supportive to sell goods like Converse already stated in 1921 according to Fisk, et al. (1993).

The importance of services became evident more and more both as independent offerings and next to the manufactured goods industry and therefore are dependent on each other. Regan (1963) describes, in what is considered as one of the first articles of services marketing, that the market expansion for commodities depends on the development of services systems that can change the consumer behaviour.

The construction of service quality is the result of different periods of thinking about services marketing. Therefore, service quality constructs are still heavily linked to services marketing.

Three periods in the development of services marketing have been identified (Fisk, et al., 1993): the Crawling Out Period, the Scurrying About Period and the Walking Erect Period.

The Crawling Out Period (1953-1980)

In the Crawling Out Period the services marketing discipline is trying to find legitimation to position itself as a separate discipline within marketing. Services marketing constructs are developed to demonstrate and conceptualise how services marketing is different from goods marketing. Goods are tangibles and services are considered to be an act that needs to be approached differently (Rathmell, 1966, p.33; Judd, 1964).

This opinion was supported by a Vice-President of the Citibank who wrote an article in 1977 attempting to find proof that services and product marketing are different (Shostack, 1977). By introducing the molecular model Shostack tried to prove that both tangible and intangible elements must be managed

carefully. Shostack demonstrated that a car is a tangible product but that being transported by car is an intangible service that functions independently from a particular car brand (p.74). The conclusion was that the service marketing industry must develop new concrete concepts instead of hazy conceptualisations. These concepts were developed in the next period.

The Scurrying About Period (1980-1985)

In the Scurrying About Period a body of knowledge of services marketing was developed, indicated by a huge growth of services marketing literature.

Two major developments were contributing to that (Fisk, et al., 1993; Brown et al., 1993).

The first development was the fact that some large services sectors were deregulated which led to huge competition in the services industry (airline industry, health care and telecommunications).

The second development was the prominent role of the American Marketing Association (AMA) in the development of a body of knowledge of services marketing. The annual AMA-conferences in this period gave a podium for scholars to discuss constructs and methodologies (Fisk, et al., 1993) increasing the research programme in the services industry. Lovelock (1983) classifies the services marketing research domain in five different aspects in his article “Classifying Services to Gain Strategic Marketing Insights”. These are the nature of the service act, the relationship between the customer and the service organisation, the room for customisation and judgement on the

part of the service provider, the nature and demand of supply for the service and the way the service is delivered (p.10).

Lovelock connects through his framework the services marketing to the strategic level, bringing services marketing into the scope of management and making the connection with total quality management and customer satisfaction. This connection led to quality thinking in the service sector: service quality.

In Europe, Grönroos documented a perceived service quality model in which a distinction is made between technical and functional quality (Grönroos, 1984). The technical quality refers to "*what* the consumer receives as a result of his interaction with a service firm" (p.38). The functional quality is *how* the customer gets the result (p.39).

This period ends in 1985 with a proposed conceptual framework to summarise the major generic characteristics of services based on a literature review about this subject (Zeithaml, et al., 1985).

Zeithaml et al. defined four unique features of services; intangibility, inseparability of production and consumption, heterogeneity and perishability, abbreviated to IHIP.

Intangibility refers to services as a performance that are not visible and cannot be felt, tasted of touched, like goods.

Inseparability of production and consumption focuses on the fact that there is no sequence between the delivery of the service and the consumption of it by the consumer.

Heterogeneity is about the high variability of services. The interaction process leads to unique situations and therefore has in every service, the potential to be unique.

Perishability means that the service cannot be stored. A hotel room that is not occupied cannot be saved (pp.33-34).

This description of service characteristics formed the foundation for a period where service quality conceptualisations were developed and tested.

The Walking Erect Period (from 1986)

The Walking Erect Period covers a period from 1986 to the present time in which services marketing has developed to an established discipline within the marketing discipline (Fisk, et al., p.63). In this period an increasing number of dissertations in services research and publications of researchers from the previous periods like Zeithaml, Bitner, Grönroos, Gummesson and Lovelock (Fisk, et al., 1993, p.75) were published. At the end of the 80's and start of the 90's the conceptualisations were tested, adjusted and applications took place in new service sectors like the hotel and health care sector. However, in the last 15 years, new conceptualisations of service quality dimensions have not been developed to have an impact that is comparable to previous constructs like SERVQUAL and Grönroos' Service Quality Model.

The publications in this period showed a growing interdisciplinary and international character of the services marketing discipline. The services

marketing discipline was overlapping other management disciplines including management, human, resources and social psychology and became internationally established as a separate discipline (Fisk, et al., 1993, pp.75-77).

One of the most influential publications on service quality was in 1988 when Parasuraman, et al. published a conceptual model of service quality called SERVQUAL (Parasuraman, et al., 1988). The SERVQUAL model focuses on the gap between expectations about the services and the perceived quality of the services. The bigger the gap between expectations and perceptions, the bigger the service quality defect is. SERVQUAL had a great impact on the thinking about service quality and grounded a methodology for the service quality research. An extensive description of SERVQUAL will be given later. The SERVQUAL concept dominates the service quality literature over the next period.

SERVQUAL is based on the concept of disconfirmation: expectations are setting the standard for perceived quality and is basically founded on the previous work of Gummesson and Grönroos. Exceeding the expectations leads to positive perceived quality, not meeting the expectations to a negative perceived quality.

Researchers tend to adopt one of those two conceptualisations where Grönroos' model is characterised as the "Nordic" perspective and SERVQUAL as the "American" perspective (Brady and Cronin, 2001 p.34).

2.5 Customer expectations

The first debate concerns the role of customer expectations in service quality. Customer expectations form in this view, the reference for the judgement of the service quality. The core theory is the disconfirmation paradigm that is derived from the consumer behaviour literature (Oliver, 1977; Churchill and Suprenant, 1982; Bolton and Drew, 1991) in which the disconfirmation paradigm is based on the premise that high evaluations of service quality occur when consumers are perceiving the delivered service better than they expected. Low evaluations occur when customers perceive the delivered service as worse than they expected (Hamer, 2006; p.219).

The disconfirmation paradigm is still the foundation for many service quality studies (Grönroos, 2007, p.72) though there is a question about whether expectations are a good predictor for service quality.

Zeithaml, et al. consider that “consensus exists that expectations serve as standards with which subsequent experiences are compared, resulting in evaluations of satisfaction or quality” (Zeithaml, et al., 1993, p.1). But they also claim that there is no consensus about the specific nature of the expectation standards. To meet this challenge they made a distinction between expectations as a predictive standard and expectations as an ideal standard. This distinction is based on a study by Prakash which explored the relationship between expectations and consumer satisfaction. In his study he made a distinction between predictive, normative and comparative expectations (Prakash 1984, p.65). Predictive expectations (will-expectations) are based on the premise how a brand *will* perform on their

brand attributes. Normative expectations (should-expectations) refer to how a brand *should* perform to satisfy the client completely.

Comparative expectations are based on expectations from a comparison between similar other brands.

Prakash found a higher correlation between predictive expectations and post-purchase evaluation than to normative and comparative expectations. This is confirmed by Hamer, who states that predictive expectations are a better predictor for perceived service quality (Hamer 2006, p.220).

A study of customer expectations emerged in hospital care (Conway and Willcocks, 1997; Gilbert, et al., 1992) and in aged care (Leventhal, 2008) which confirmed that customer expectations are an important concept in the quality of health care services.

This leads to the assumption that managers have to manage customer expectations of the service, in order to manage customer satisfaction. Kopalle and Lehmann (2001) state that their analysis of a study also showed that customers lowered their expectations to increase future satisfaction, so a strategic management of expectations will not work.

One of Anderson's earlier findings in 1973 contradicts the findings of Kopalle and Lehmann, because Anderson (1973) found that higher customer expectations lead to higher perception of quality.

These findings mean that when service firms manage expectations well, the quality experienced by customers increases.

Kopalle and Lehmann also showed that the disconfirmation construct is individually bound, in other words, the post-evaluation of received services is not always judged by a clear disconfirmation.

Other researchers support this view by empirical evidence that the disconfirmation construct in service quality plays a minor role in the judgement about the delivered services. They claim that perceptions directly influence service quality and not expectations (Boulding, et al., 1993; Lee, et al*.,* 2000).

Cronin and Taylor developed a view on service quality that is not based on the disconfirmation paradigm. The service quality concept, should in their view, be the customers' attitude towards the service (Cronin and Taylor, 1992). By giving an importance weighted evaluation of specific service attributes, the customer can give a judgment about the quality of the services that they receive.

2.6 Perceived service quality and customer satisfaction

There is considerable debate about the existence and nature of a relationship between perceived service quality and customer satisfaction. Different views can be found.

In 1982 Grönroos introduced the term "perceived service quality" (Grönroos, 1982) based on a term "perceived quality", which had already been used by Gummesson in 1978 (1978, p.94), to emphasize the subjectivism in the judgment of customers about the delivered services. Perceived service quality refers to *how* and *what* the customer perceives as the delivered

service. This started a debate about the difference and the relationship between perceived service quality and customer satisfaction. Some scholars agreed with Grönroos, that perception of service quality is different from customer satisfaction (Parasuraman 1985; Spreng and McKoy, 1996, Bitner, 1990). Other research indicates that perceived service quality and customer satisfaction are similar concepts (Iacobucci, et al., 1995).

According to Grönroos the key issue concerns “whether quality is perceived first and then satisfaction, or satisfaction with a service comes first and then leads to a quality perception (...)” (Grönroos, 2007, p.89).

In 2001 Grönroos suggested that a discussion about the difference between perceived service quality and customer satisfaction was unnecessary and could be avoided if the perceived service quality concept was introduced as perceived service features (Grönroos, 2001, p.151).

Studies of the perceived quality concept have concluded that there is a need for a better conceptualisation of perceived service quality (Roest and Pieters, 1997; Brady and Cronin, 2001).

Another important aspect of the perception of service quality is the interaction between the provider and the customer. These service encounters are determinants of perceived service quality also called “the moments of truth” introduced by Normann (Grönroos, 2007, p.81). The term refers to the time and place where the service provider can demonstrate the quality of his service to the customer. According to Grönroos’ terminology this is the moment that the functional quality can be demonstrated. The term “moments

of truth" became well known after a book was published about the turn around of the Scandinavian Airline System (SAS) that was documented and written about by Carlzon, president of SAS (1987). The book consists of several stories in which Carlzon described his experiences as president of SAS. The red line in the book is that "front line" employees must have the courage to take initiative to solve passengers problems to turn the organisation into a customer oriented company: "SAS had maintained its reputation for punctuality – all because one employee had dared to find an unusual solution to the problem" (p.85).

Grönroos proposes four quality generating resources that are important in the moments of truth (2007, p.365): customers involved in the process, customer contact employees, system and operational routines and physical resources and equipment.

The multidimensionality of service quality is a further area of debate in service quality research. Is service quality based only on service performance, or does service quality also include other dimensions like outcome, the result of the service delivery and the physical environment in which the service is performed? Furthermore, what are the generic attributes (dimensions) on what users judge service by?

One of the criticisms of SERVQUAL is that it only focuses on the service delivery process and not on the outcome of the delivered service .

The so-called Nordic school represented by Grönroos and Gummesson includes the outcome of services delivery in the conceptualisation of service quality (Brady and Cronin, 2001, p.35). The physical environment of the

service delivery, the so called physical quality dimension is included in the service quality definition by Lehtinen and Lehtinen (1991).

Dabholkar, et al. (2000) tested a conceptual model of retail service quality and concluded that consumers evaluate different factors or attributes related to the service but also form an overall evaluation of service quality. In other words, there are different levels in the evaluation of service quality.

2.7 Conceptualisations of service quality

In this section key conceptualisations of service quality will be presented. Key means in this context that these concepts are considered by scholars as influential and that each concept contributed to the foundation of mainstreams in the service quality research proven by the number of times that the concept is used as a reference in research studies on service quality.

Grönroos' service quality concept

The model

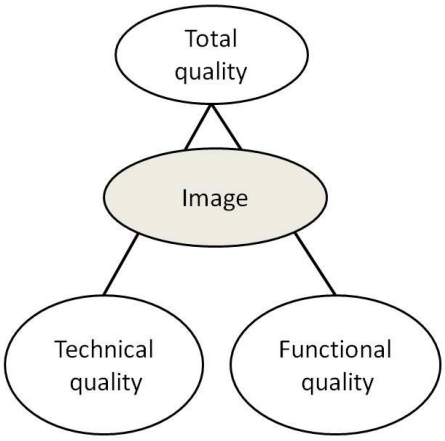
In 1984 Grönroos presented a service quality concept (Grönroos, 1984) which includes the outcome and process dimension as described in section 2.6. Grönroos' conceptual model consists of two aspects of service quality: the technical and the functional quality. The technical quality refers to the outcome of the service process. For example: a hotel guest is provided with a room and a bed. The functional quality refers to the delivery process of the service, especially in situations where there is a high number of interaction between the customer and the service provider, the functional quality will

count substantially towards the perceived quality (Grönroos, 2007, p.73). This makes the relationship between provider and customer an important variable (inseparability). In the example of the hotel, the functional quality refers to the way the guest is received by the reception, how his check-in is handled, how the hotel staff direct him to the room and the delivery is of hospitality like breakfast and staff friendliness.

Grönroos also includes the image of the service provider as an important quality dimension in his model, because the customer expectations are influenced by their view of the company (corporate image) (Grönroos, 1984, p.39). It can affect the customer perception in various ways. If the image of the service provider is positive in the mind of the customers, minor mistakes will be forgiven. But if the image is poor in the mind of the customers then any mistake will have a greater impact. Image can be viewed as a filter towards quality perception (Grönroos, 2007, p.74). The dimensions in the Grönroos' model were supported by empirical evidence (Kang and James, 2004).

Grönroos' model is summarized in the following figure:

Figure 1: Grönroos Total Quality model (Grönroos, 2007, p.74)



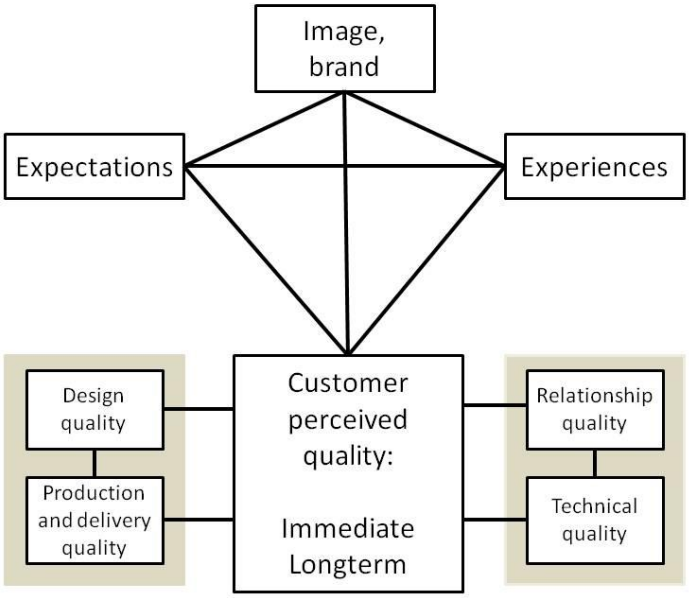
Gummesson's 4Q Model

The model

In 1994 Gummesson presented his 4Q model which is a synthesis with the Grönroos model. The basic element in this model is that services and physical goods are integral parts of services offered (Grönroos, 2007, p.80). This is the reason that Gummesson included some tangible good variables in the model. The model is also based on the disconfirmation paradigm and includes expectations and experiences variables. The image variable in Grönroos model is extended with a brand variable.

Grönroos intended that image is related to the customers' view of the firm while the brand variable "refers to the view of a product that is created in the minds of the customers" (p.81).

Figure 2: Gummesson's 4Q model (adapted from Grönroos 2007, p.80)



The design quality and production/delivery quality variables in the bottom left corner of the model represent the *sources* of service quality. The relationship quality and the technical quality in the bottom right corner of the model represent the *results* of service processes. The quality as perceived by the customer is the result of the sources and the service process and the judgement between expectations and experiences which is influenced by the image and brand. The long-term perceived quality is the spin-off of a well perceived service delivery and leads to a long- term relationship between the customer and the service provider.

SERVQUAL

The model

The SERVQUAL-model is the result of a multi-year research by Parasuraman, Zeithaml and Berry. In 1985 they published a conceptual model for service quality (Parasuraman, 1985) in which they presented 10 dimensions of service quality. These 10 dimensions were access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles and understanding/knowing the customer. These dimensions were identified by conducting 12 focus group interviews with service customers and in-depth interviews with executives of four nationally recognised service firms in retail, banking, credit card services, securities brokerage and product repair and maintenance. The investigation was executed in the South-West part of the United States.

The next phase was the refinement of the SERVQUAL model. The previous 10 dimensions from the 1985 conceptual model which were operationalized in 97 items. The data were collected from a survey based on these items of a shopping mall sample in five businesses (appliance repair and maintenance, retail, banking, long distance telephone, securities brokerage and credit card services). Each business sample contained 40 recent users of that particular service. The analysis of these data (factor analysis and reliability scores) resulted in a reduction to 34 items in 7 different dimensions.

To evaluate this 34 items scale, a second survey was conducted: a shopping mall sample of 200 customers for each firm in four businesses (a bank, a credit-card issuer, an appliance repair and maintenance firm and a long-distance telephone company). The data from this second survey were analysed and another reduction to five dimensions was identified. These five dimensions are:

- Tangibles: the physical facilities, equipment and appearance of personnel
- Reliability: ability to perform the promised service dependably and accurately
- Responsiveness: willingness to help customers and provide a prompt service
- Assurance: knowledge and courtesy of employees and their ability to inspire trust and confidence
- Empathy: caring, individualized attention the firm provides its customers.

These five dimensions are operationalized through 22 scale items.

A key element in the SERVQUAL model is the notion of confirmation/ disconfirmation construct: the service quality is the result of the expectation-performance gaps along these dimensions.

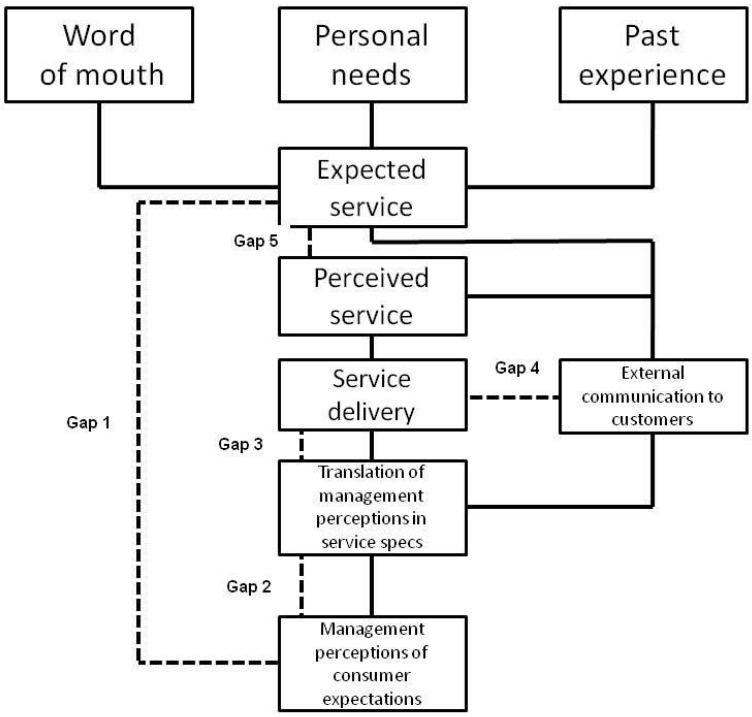
Parasuraman, et al. (1988) identified five gaps between:

- the consumer expectation and management perception: how congruent are the executive perceptions and the consumer expectations?
- management perception – service quality specification: how well is the management perception translated into service quality specifications?
- service quality specifications and service delivery: is the service delivery according to the specifications?
- service delivery and external communications: is the service delivery in accordance with what is promised to consumers by external communications? These promises will not only affect the expectations of consumers but also the perceptions of the delivered services.
- expected service and perceived service: the gap between expected and perceived service is directing the perceived service quality of the customer.

The results were published in 1988 by Parasuraman, Berry and Zeithaml (Parasuraman, et al., 1988) and had a major impact on the service quality research community.

The SERVQUAL-model is displayed in the following figure:

Figure 3: SERVQUAL-model



Critiques of SERVQUAL

SERVQUAL laid the foundation for the measurement of service quality because it is more operationalized and replicated than any other service quality construct. This is remarkable because the model is based on several samples in a regional part of the United States so the ability to generalise the results are limited. However, SERVQUAL has been criticised by other researchers (Brown, et al., 1993; Cronin and Taylor, 1992).

The criticisms on SERVQUAL can be categorised into theoretical and operational criticisms (Buttle, 1995), reflecting the debates mentioned in section 2.6. in this thesis.

The theoretical criticisms focus on the foundations of the model. The first criticism is that the SERVQUAL-model is based on the disconfirmation

paradigm without a proper theoretical foundation. The gap analysis assumes that customers are judging quality based on perceptions minus expectations. There is little empirical evidence that proves this.

The second criticism is that SERVQUAL does not include the outcome of service but is only focused on the delivery process.

Finally, the SERVQUAL five dimensions are not universal. This is also recognised by the researchers who proposed SERVQUAL. Parasuraman, et al. state five years after the first publication of the SERVQUAL model that the SERVQUAL dimensions are “the basic “skeleton” underlying service quality that can be supplemented with context-specific items when necessary (...)” (Parasuraman, et al., 1993, p.145).

The operational critics focus on the lack of measurements of normative expectations, variability within dimensions, variation of customer assessments during moments of truth and the construction of the instrument.

Parasuraman, et al. have refined the SERVQUAL model in 1991 (Parasuraman, et al., 1991) by using predictive expectations instead of normative expectations by changing the wording that excellent companies “will” instead of “should”.

SERVPERF

The model

Cronin and Taylor developed a concept based on an attitude paradigm instead of the disconfirmation paradigm of SERVQUAL (Cronin and Taylor, 1992). In this concept they wanted to offer an alternative model that addresses the criticism of the disconfirmation paradigm and to avoid the validity problem in the measurement of expectations, a way that is described by Grönroos as “easy to administer” and “easier to analyse” perceived service quality (Grönroos, 2007, p.88).

SERVPERF covers the same dimensions as SERVQUAL, but does not measuring the expectations - experience gap.

Critics on SERVPERF

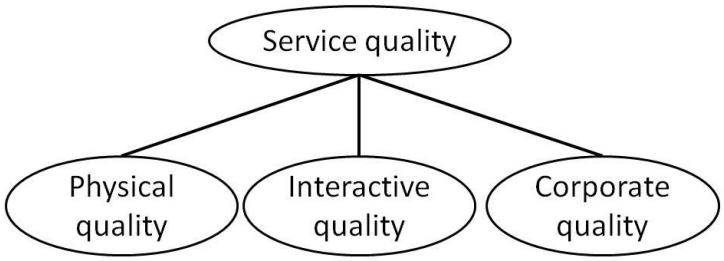
The claimed superiority (Brady and Cronin, 1992) of SERVPERF over SERVQUAL is challenged by empirical evidence. Carrillat, et al. (2007) claim from their study that SERVPERF has less diagnostic value than SERVQUAL because of their performance-only character. On the other hand the predictive validity of SERVPERF towards overall service quality is equal to SERVQUAL (p.485).

Lehtinen and Lehtinen

The model

Lehtinen and Lehtinen presented a three-component model (Lehtinen and Lehtinen, 1982) in the conceptualisation of service quality. The three components were physical quality, interactive quality and corporate quality (see figure 4).

Figure 4: Lehtinen's model of Service quality



This model was the first model that explicitly defined tangible elements like the physical environment as an aspect of service quality. Physical quality concerns the physical elements of the service: physical instruments and environments including materials and facilities (Lehtinen and Lehtinen, 1991 p.288).

The interactive element focuses on the elements between the customer and the service provider. The interactive elements include the staff, the people, the customers interact with and the interactional equipment, like self-service gas pumps. Lehtinen also includes other customers as part of interactive

elements like in a disco (p.290).The corporate quality concern show customers and potential customers the corporate institution. The corporate quality is very similar to the aspect image in Grönroos' model.

Criticisms of Lehtinen and Lehtinen's model

Since this model was one of the earliest conceptualisations of service quality, the criticisms of this model are limited. The model was later supported by other scholars who conceptualised service quality accordingly like Rust and Oliver (1994) ,who presented a three component model in 1994, consisting of similar components: service product, service delivery and service environment (Brady and Cronin, 2001 p.35).

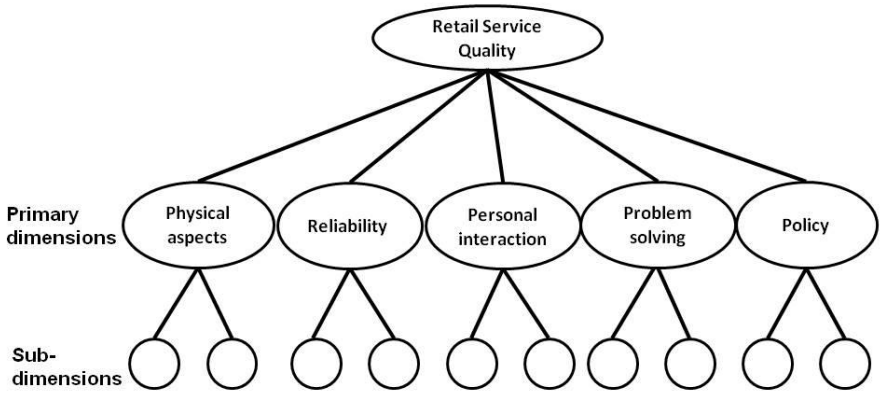
Dabholkar's conceptualisation of service retail quality

In 2000 Dabholkar, et al. presented a conceptual model for retail service quality (Dabholkar, et al., 2000). The conceptual model suggested a premise that service quality is not only measured on relevant factors but that there is also an overall service evaluation of the customer based on antecedents of service quality.

The interesting thought in this model is that Dabholkar, et al. introduces multi-levels between the different elements of service quality. They make a distinction between the overall consumer perception of service quality, primary dimensions (physical aspects, reliability, personal interaction, problem solving, and policy) and sub-dimensions that cover the multi-faceted nature of service quality dimensions.

The overall retail service quality is seen as a higher order that is constructed by the dimensions and sub-dimensions (see figure 5).

Figure 5: Dabholkar, et al. Retail Service quality model



2.8 Measuring of service quality

Attribute based and qualitative measurements

Grönroos makes a distinction between attribute-based measurement instruments and qualitative measurement instruments (Grönroos, 2007, p.83).

Attribute-based measured instruments are measurement models that are based on attributes describing the service. The conceptualisations of service quality can be operationalized with attribute-based measurement instruments.

Qualitative measured instruments are measurement based on qualitative research methods, like models based on the assessment of critical incidents.

In the last 20 years more attention has been paid towards qualitative research methods in service quality research. This was initiated by a discussion in (service) marketing research that pleaded for a more qualitative approach next to the traditional quantitative research methods to raise the scientific status of market research (Gummesson, 2005).

The notion that conceptualisations of service quality need a context specification have also initiated the attention towards qualitative methods in service quality research.

Zone of tolerance

An aggregated level of personal expectations can define a standard, which can be seen as normative or predictive. When the standard of expectation is set and perceived service quality is measured, three outcomes are possible based on the disconfirmation paradigm: dissatisfied, delighted or satisfied (Johnston, 1995, p.47). But are these pinpoints absolute or is there a tolerance level that is defined by the customer? In the service quality literature, the so-called “zone of tolerance”, is important to identify because customers may accept some variations in performance without affecting their satisfaction. Zones of tolerance can be defined as “a kind of inertia regarding behavioural responses to disconfirmation of expectations” (Liljander and Strandvik, 1993, p.23). Also important is that an increase in performance within this zone of tolerance may have just a marginal effect on the perceptions of the delivered services (Johnston, 1995, p.48).The zone of

tolerance can influence the outcome in the measurement of perceived service quality.

2.9 The current status of service quality research

Service quality research and marketing research

A general remark about service quality research is that it is developed and operates in the shade of marketing research. The literature review shows that conceptualisations of service quality were initiated by dimensions in marketing research. Customer expectations, customer perceptions and image are dimensions from the market research that are used as elements in the development of service quality research.

Therefore it could be argued that the service quality research is resting on two mainstreams, one is of service quality as a supporting structure for selling goods and services and the other is service quality as an end product. Actually it could be said that the first mainstream is product marketing while the second one is about an integral part of total quality of services marketing. In this respect it can even be the case that services marketing will be the dominant mainstream bearing in mind that the services sector has taken over the main contributing role to economies. The share of the service sector amounted to about 70% of total value added in most OECD economies (Wölfl, 2005, p.28) and is still growing.

Ontological definition of service quality

The literature about service quality is practical, whilst the term “quality” is more anecdotally and less formally defined (Kim, et al., 1999). Garvin (1984) is the only author who paid attention to the ontological definitions of quality. Therefore a more philosophical approach is needed to define service quality. This could indicate that quality in general and service quality in particular is difficult to define precisely in a general overall definition. This means that service quality definitions can only be precise when they are defined in the context of particular services. New service businesses lead to other conceptualisations.

Service became more and more important to the national economies and new service sectors emerged including IT and web based services. This increased the attention to service quality and affected service quality research which increased the number of service quality studies and also led to more attention to the methodology of the services research. The SERVQUAL model has made an impact on the services research agenda in the last 20 years which has also led to a dominance of quantitative methods in the service quality research. New services that did not exist in the 80’s when SERVQUAL was developed, have new characteristics. Web-based services for example, are not in a face to face interaction with the client. The question is if SERVQUAL is applicable in these kinds of services (Tate and Evermann, 2010). Although a study suggests that the SERVQUAL conceptualisation is applicable to websites (Van Iwaarden et al., 2002) new concepts have to be added to validate service quality in new businesses.

This supports the view of Lovelock and Gummesson who consider that a new paradigm and fresh perspectives are needed in services marketing research (Lovelock and Gummesson, 2004). They suggest focusing on specific sub-fields in which, for example, the interaction between customer and service provider varies greatly (p.33). They also introduce a new unifying service paradigm of non-ownership (p.34). Non-ownership refers to the thought that the ownership of services is not transferred to the customer as it is with goods. This is especially the case in services where professional knowledge plays a major role that cannot be separated from the service provider like law and medical services. This highlights the importance of relationship. Lovelock and Gummesson are not driving this to the end. Their paradigm is created around the notion that “marketing transactions that do not involve a transfer of ownership are distinctively different from those that do” (p.34).

From a static to a dynamic model: relationship quality

The conceptualisation of perceived service quality is essentially static. The need for a more dynamic conceptualisation emerged in the beginning of the 1990’s in service quality research as interest in relationship quality increased. Grönroos describes relationship quality as “the dynamics of long-term quality formation in on going customer relationships” (Grönroos, 2007, p.91). In this approach time is an important factor. The perceived service quality measurements describe how the service quality was perceived in a certain episode. The service act is related to the episode and the sequence in this

relationship quality approach. This combination forms the relationship quality: act x episode x sequence = relationship (pp.92-93).

Svensson also states that the outcome of service quality depends on the interaction process between service providers and service receivers (Svensson, 2006). According to Svensson, current service quality research is emphasizing the customer's role but with less emphasis on the service provider's role (p.249). Therefore, Svensson pleads that service quality research must include "the participation of both parties such as interactive service quality" (p.251).

More qualitative approaches in service quality research

Different scholars have suggested the need for a more dynamic and contextual approach in service quality research which has consequences for the methodology in service quality research. Qualitative approaches are becoming more prevalent. Lovelock and Gummesson think that it might be useful to use the grounded theory in service quality research in identifying sub dimensions of service quality in specific service subfields (Lovelock and Gummesson, 2004, p.34). Gummesson criticises the attitude of marketing researchers that the reality does not fit in the mainstream paradigm and its techniques (Gummesson, 2005, p.325). Gummesson recommends that if marketing researchers philosophically accept that there is a reality, the methodology of marketing research needs to adjust their methods to encompass this reality.

2.10 Service quality research in health care

Is the care sector a service sector?

The care sector is considered to be a service industry. Although the role of the customer and the service purchase process is different from other service industries, the care sector shows the service characteristics (Zeithaml, et al., 1985). The service features of intangibility, inseparability of production and consumption, heterogeneity and perishability (IHIP) (p.33) are also identified in the care sector in general and the nursing home services in particular.

Intangibility is also the case with service delivery in a nursing home which is in essence an interaction between a staff member and a resident and therefore not a touchable good, but as in many services there is always a large element of tangibility involved like the room of the resident.

Inseparability of production and consumption focuses on the fact that delivering care to a resident is also instantly "used" by the resident in the nursing home.

Heterogeneity of the service is necessary in a nursing home. In nursing homes every resident has its own unique need based on individual situations. The service has to adjust to individual needs in order to service the resident in the best way the nursing home staff can provide.

Perishability means that the service cannot be stored. This is also the case for a non- occupied room in a nursing home.

Applicability of SERVQUAL in health care

Service quality research in health care is emerging. The focus of service quality research in health care is about the applicability of the SERVQUAL concept in different health care environments like hospitals (Babakus and Mangold, 1992) and long term care facilities (Kilbourne, et al., 2004), the consumer expectations and perceived service quality. A cross-national study of perceived quality in long term care facilities in the USA and the UK by Duffy, et al. (1997) shows the applicability of SERVQUAL in long term care.

However, the SERVQUAL-instrument needs to be modified to be applicable in hospital services. The results are mixed. According to Babakus and Mangold SERVQUAL gives a robust instrument to measure functional quality in hospitals, but cannot be seen separately from functional quality (diagnoses and procedures) (Babakus and Mangold, 1992, pp.780-781). This may be true, but it is also the case in other sectors where highly educated professionals work, such as the airline industry.

It can even be said that the focus in health care was too much on functional quality in the past and that the customer perspective was secondary.

Other findings indicates that the SERVQUAL dimensionality is difficult to apply in health care and needs additional testing (Vandamme and Leunis, 1993).

Customer expectations and perceived service quality in health care

Research of customer expectations in health care concludes that there is a need for further focus on the adaptation of customer expectations in health care. The role of expectations is relatively low on confirmation and satisfaction. Findings show that customers still show overall satisfaction with a physician although disconfirmation occurs (Gilbert, et al., 1992; Conway and Willcocks, 1997). It seems that customer expectations shift with the situation the customer or patient is in.

Research on perceived service quality in health care is overshadowed by extensive research on patient satisfaction (Gill and White, 2009, p.15). Only a few studies were undertaken to determine perceived service quality in health care. These studies show that several dimensions are important to the perception of the delivered service by the patient, including assurance and reliability (Etgar and Fuchs, 2009) or access and courtesy in senior care (Chang, et al., 2008). Therefore, more research is needed on perceived service quality in health care to be able to understand more from the patient's perspective.

Constructs of Service Quality in health care

Some researchers have tried to translate service quality dimensions to health care.

Proctor and Wright (1998) define three dimensions of health care services (p.6):

- institutional quality referring to the corporate image of the health care provider
- physical quality referring to the physical process of the service including tangibles and the service outcome
- interactive quality referring to the interaction between the service provider and the patient.

Proctor and Wright point out that the outcome of health care services is difficult for many health consumers to assess because it requires extensive professional clinical knowledge (p.7). Here the element of trust comes in as an important element in the sense that the medical professional is providing a good service that solves your health problems. This is subject to change because the access to professional knowledge nowadays is very easy by the Internet but cannot always be judged easily by patients because of the lack of extensive medical knowledge.

2.11 Summary

The manufacturing industry started quality thinking in the context of delivering constant quality goods, involvement of different people to a single product and productivity. The development of marketing laid the foundation for service quality that connects service quality research very closely to marketing research.

In the conceptualisation of service quality there is a distinction between an American and a Nordic/European school of thought.

The American school is dominated by the SERVQUAL model which is focusing on the service delivery process while the Nordic/European school represented by Grönroos and Gummesson also includes the outcome of the service.

Conceptualisations of service quality can either be based on the disconfirmation construct or an attitude based approach.

The measurement of service quality is closely connected to the conceptualisation and the context of service quality. From the current debates, the conceptualisations and the criticisms of it, it can be said that the measurement of service quality is a highly complex and sensitive matter.

This implies that every conceptualisation of service quality and measurement scale in research should be validated in each service business sector (Brady and Cronin, 2001, p.45). From the literature, this is not always properly done, and though research in different sectors has led to modifications in measurement tools, this should be more in-depth. The debates about disconfirmation versus attitude-based models, relevance of quality dimensions and qualitative vs. quantitative research methods should be considered for each service sector. For example, to validate measurement of service quality by a gap-analysis, the concepts of customer expectations and perceived service quality should be related to the context of a particular service business sector. In this discussion a more dynamic approach has emerged: the relationship quality that connects the service delivery to a certain time episode and sequence. The relationship or interaction approach will lead to a new path in service quality research.

The rise of new businesses like web based ones will lead to new approaches and conceptualisations because foundations of established service quality constructs like face to face contact are is not present in new businesses like internet services.

Despite all the debates and developments the SERVQUAL construct is still the most influential and recognised service quality conceptualisation.

2.12 Conclusions from the extant research

This section considers conclusions from the literature review related to the objectives formulated in chapter 1.

The first objective was to establish the dimensionality and develop scale items for service quality in nursing homes. This concerns a service quality construct that captures all aspects of nursing home services based on established service quality constructs. The conclusion from the literature review is that the early work of Parasuraman, et al. the SERVQUAL conceptualisation, is suitable to function as the foundation for a service quality construct for nursing homes.

The second objective was to explore if disconfirmation as the foundation for perceived service quality. The conclusion from the literature is that the disconfirmation paradigm can underpin perceived service quality.

The third objective was to understand the role of perceived service quality as an predictor for resident satisfaction. The conclusion is that despite the debate about the distinction between perceived service quality and resident satisfaction, that in this study they are considered as distinct concepts.

The suitability of SERVQUAL

Gummesson and Grönroos laid the foundation for the conceptualisation of service quality by introducing the concept of perceived service quality and technical and functional quality where the perception of the service delivery by the customer and the interaction between service provider and customer comes into focus.

SERVQUAL was the first concrete measurement instrument that had a major impact on the research in service quality. Although the research results where the SERVQUAL concept was used, cannot be generalised, the SERVQUAL concept is widely applied simply because SERVQUAL was the first operationalized concept about service quality with considerable face validity. It was further validated by empirical evidence although it was only tested in specific business sectors. That made it also vulnerable to criticism. The high numbers of articles that apply the SERVQUAL instrument in different business sectors, also indicates that scholars are happy with a comprehensive model of service quality and its measurement tools and were not very critical about its content. The criticism came from influential researchers who contributed to an improvement of the application of SERVQUAL in the service industry but also tried to construct alternative models. For this study three critical points are relevant.

The first is that expectations are not static, that they shift during the service delivery process and that they are very difficult to measure. From this point of view expectations are more complicated than described by SERVQUAL. On the other hand with the exclusion of expectations in the performance

measurement by the SERVPERF model, essential information will be lost about the customer reference to the judgement about service quality. The position of the customer towards the service delivery is also important: is the customer heavily dependent of the service or not? This is a major issue in the context of a nursing home.

Secondly, SERVQUAL does not include the outcome of the service. The outcome needs a broader definition or must be added with another dimension: effectiveness of the delivered service. For example: in Grönroos' view of outcome he uses the example of a hotel room and bed as an outcome of the service. However, when the room is noisy and the guest cannot sleep, the effect of the delivered service is negative. This will influence the perceived service quality. So effectiveness is also an element that cannot be ignored. In the context of a nursing home the question arises how effectiveness should be defined: is it the quality of health or the quality of life? Or does effectiveness shift with the health situation of the resident?

Finally, the physical environment must be included as an important aspect of service quality, such as: a hospital that is dirty will influence the patient's expectations about a healing environment in the hospital. In the nursing home context a private room can be important to ensure a resident's privacy.

The main conclusion is that SERVQUAL is suitable for the purpose of this study. It is an established, influential service quality construct. SERVQUAL includes expectations that is considered as necessary for the nursing home sector to increase customer satisfaction. SERVQUAL is an operationalized

concept although contextualisation is necessary to apply this model in the nursing home sector.

Disconfirmation foundation for perceived service quality

There is a lot of discussion about the disconfirmation paradigm as the foundation for perceived service quality. Attitude based models are developed as a response to this discussion. However, disconfirmation is still an important foundation for many service quality studies. Therefore, the disconfirmation paradigm will be used in this study as foundation for perceived service quality.

Customer expectations will be defined as predictive expectations and not as normative expectations. The argument for this choice is that Parasuraman, et al. changed the normative expectations in the SERVQUAL model to predictive expectations based on empirical findings of other researchers.

Perceived service quality as a predictor for customer satisfaction

The question arises, from the literature review, about the relationship of perceived service quality and customer satisfaction and whether they are distinct concepts or not. Perceived service quality and customer satisfaction are seen as distinct concepts in this study. The reason is that this study has an exploratory character to apply existing concepts in the nursing home sector. To assume beforehand that perceived service quality and customer satisfaction are similar concepts limits the exploratory character of this study.

2.13 The contextualisation of SERVQUAL in nursing homes

This section describes the features of a nursing home environment that has to be taken into account when the SERVQUAL model is used as a reference in this study.

SERVQUAL is applied to health care with some modifications to the instrument but without thinking through to the fundamentals of this specific service sector. These fundamentals are the nature of the purchase of nursing home services, the high dependency of the customer on the service provider, the long period of interaction between customer and service provider, the physical environment, the regulations for the service provider, the effectiveness of the provided service, the access to services and the involvement of the family in the service delivery.

Purchase of nursing home services

The “purchase” of nursing home services is very different from other service contexts: first of all, the difference with other service industries is that the choice for the service is involuntarily. The need for a nursing home is the result of a long process in which decline of health and/or mental capabilities become more evident. When the point is reached that the home situation is not suitable anymore to fulfil care needs, the nursing home is seen as an inevitable destination, as a last resort (Naleppa, 1996).

Secondly, the decision to place someone in a nursing home is mostly taken not by the one who needs nursing home services, but by a spouse or the family. The decision to place their loved ones in a nursing home comes with

feelings of guilt and betrayal (Butcher, et al., 2001, p.477) by spouses and family.

Dependency of the customer

The service quality literature does not pay attention to the position of the customer. How dependent is the customer on the service he wants to receive and what are his possibilities to switch to another service provider? This is not an exclusive item for health care as it also occurs in other sectors. An example is a passenger who missed his flight and is in need of another flight to his destination. How does that effect the passenger's expectations and perceptions?

In the case of a nursing home, a resident is admitted because the situation at home cannot be handled any more. The move of the resident to a nursing home will give relief to the situation. This will affect the expectations and perceptions of the resident (and his/her family). What also influences the dependency of the resident is the way that society looks at residents of nursing homes especially residents with dementia. Are they seen as frail and vulnerable and people who are not able to make their own choices? Several researchers consider dementia as a social stigma. A stigma was defined by Goffman who connected the ancient Greek term stigma to social identity (Goffman, 1963). In Goffman's view the central feature in stigmatized personal life is "acceptance" (p.8). Society does not accept people with deviant behaviour and stigmatises them as not normal. In the case of dementia, the medical profession is used to legitimate the stigma of dementia

by its diagnosis. This is the case with persons who have a psychiatric disease, but this is also the case for people with dementia. Their behaviour does not fit into what is generally accepted (the norm), resulting in the need to ‘put them away’ in an institute that takes care of them. Harding and Palfrey (1997) state that the ‘demented’ have to be controlled “within the wall of institutions” (p.143). When looking at nursing home residents in this way, the question then arises, how does the nursing home sector look at their residents: are they customers or objects that they have to take care of ? The attitude towards residents also influences the way the nursing home services are organised and delivered.

Long period of interaction

The resident lives in the nursing home and this means that during this period the interaction with the staff and service providers is frequent and intense. This influences the service encounter, the expectations and the perceptions of the delivered services.

The relationship quality is key in the nursing home sector because of the long period of interaction. In these long lasting relationships other attributes emerge such as trust in relation to safety instead of customer loyalty between the staff and the resident/customer. Therefore, more research is needed about the dynamics of expectations of residents in nursing homes during their stay.

Role of the physical environment

The role of the physical environment in residential care facilities is a very important attribute. The resident lives *in* the service environment so the service environment is part of the delivered services. That is fundamentally different from service industries where the customer is only staying in the service environment during the service delivery process, like in a garage.

Regulations for service providers

In health care but also in other sectors, professionals play a major role in the service delivery process. Physicians, nurses and other professionals have protocols and procedures formulated to ensure the technical quality and safety of the patient. This influences the service delivery process (the functional quality dimension) in a way that the service provider cannot freely adjust its service delivery process to the customers' wishes. There must be a careful balance between the technical and functional service quality including the physical environment. Much attention has been paid to the technical quality, now more research is needed to the functional quality, how the services are delivered in nursing homes.

Effectiveness of the service

As mentioned before in the example of the noisy hotel room, the effectiveness of the delivered service in this way is not described in the service quality literature. Service effectiveness is defined in relation to the perception of the delivered service but is not described as the effect in

fulfilling the customer's need that brought him to purchase that particular service. Returning to the hotel room example, the guest needed a place to sleep. By providing him a room he is able to sleep. But when the room doesn't meet the standards of quietness, the guest's needs are not fulfilled because he couldn't sleep. The question raises where the responsibility of the service provider ends and where the customer's responsibility starts. It could be argued that the responsibility of the service provider covers all the aspects that he can influence in the case of a nursing home. Quality of life of residents is an important factor, but quality of life is a highly personal, subjective and multi-dimensional concept, that cannot be determined by the nursing home staff and the provided services.

Access to services

In the private sector access to services is not an issue. In health care however, access and choice for certain services can be a problem. Waiting lists for an operation will probably influence the expectations of the customer of a hospital. Freedom of choice to purchase a certain service is an important element in this context. From this point of view, choice will empower the customer's position towards the service provider. This will lead to more need for customer's perception of service quality in health care from the provider's point of view. If there is no choice, the service provider will have a stronger position towards the customer and will probably not be so interested in service quality research.

Involvement of family in service delivery

Apart from the involuntary choice, the long service encounter and the dependent relationship with the service provider, the role of family is also important, especially when residents are not able to express themselves. This is not always realised by family members in a nursing home environment (Natan, 2009). Involvement and participation of family in nursing home care is already a long discussion (York and Caslyn, 1977; Bowers, 1988). Involvement of family members can preserve dignity and prevent depression of their loved ones who live in the nursing home (Bowers, 1988, p.367).

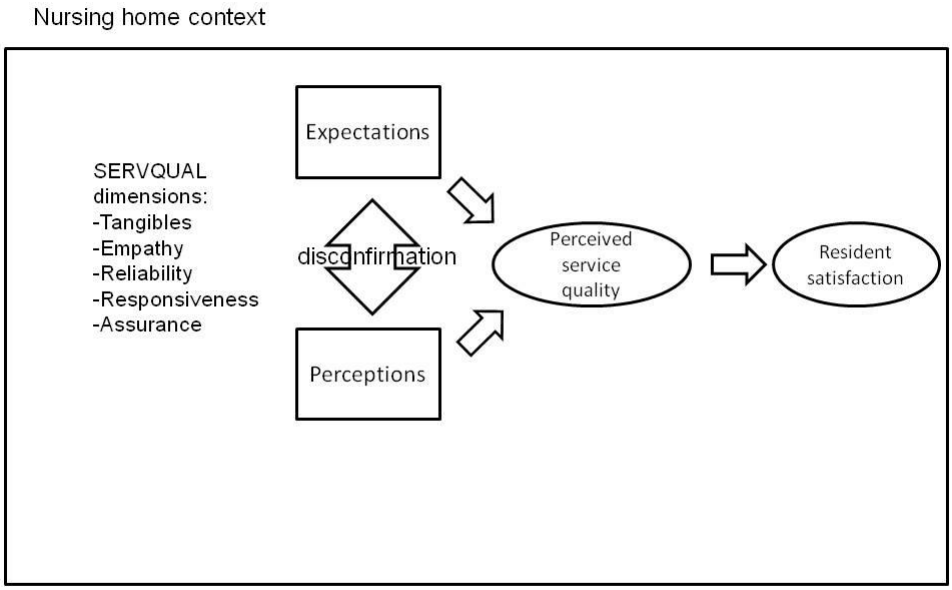
This means that the customer role of residents who cannot express themselves in a way that others can understand such as residents with severe dementia, family must be involved to study customer satisfaction.

These aspects described above shall be taken into account when the SERVQUAL concept is used in this study as a reference model for service quality in nursing homes.

2.14 Conceptual model for this study

The following model for this study was constructed (see figure 6) based on the SERVQUAL model as reference for this study and the need to relate and perceived service quality to customer satisfaction.

Figure 6: conceptual model



This conceptual model describes four important elements for this study that will take place in a nursing home context. Comparison of expectations and perceptions of services in the nursing home can lead to a perceived service quality if this concept is founded on the disconfirmation paradigm.

The expectations and perceptions of services can be measured by the SERVQUAL dimensions (tangibles, empathy, reliability, responsiveness, assurance). This part of the conceptual model focuses on gap 5 in the SERVQUAL model between expectations and perceptions of service delivery.

Perceived service quality and resident satisfaction (In this context the term “resident satisfaction” is used instead of “customer satisfaction”).are two distinct concepts but the relationship stays unclear.

2.15 Objectives of this study linked to the SERVQUAL model

The objectives as were formulated in chapter 1 can now be formulated more specifically with the elements of the SERVQUAL model with customer satisfaction included and based on the conceptual model for this study:

- To establish the dimensionality and develop scale items for service quality in nursing homes by exploring the suitability of the SERVQUAL dimensionality and scale items in nursing homes.

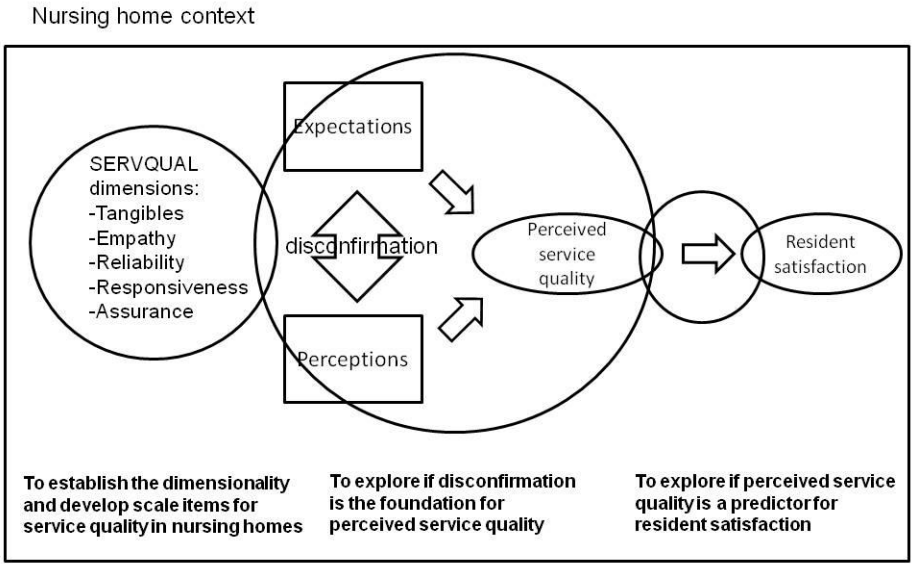
  The SERVQUAL dimensions and scale items were based on data from other industries than nursing homes. Therefore it is important to demonstrate that these dimensions and scale items cover all aspects of service quality in nursing homes.

- To explore if the disconfirmation paradigm is the foundation for perceived service quality in nursing homes. The main paradigm under the SERVQUAL conceptualisation of service quality is the disconfirmation paradigm. According to the disconfirmation paradigm the perceived service quality by the customer tends to follow the difference between expectations about and perceptions of, delivered services, but the question is if the disconfirmation is also present in a nursing home context. Do residents have expectations and are expectations and perceptions of the delivered services described on the same semantic level?

- To explore if perceived service quality is a predictor for resident satisfaction. This aim focuses on the relationship between perceived service quality and resident satisfaction. The perceived service quality of delivered services by the resident based on the disconfirmation is not always equal to resident satisfaction. If the concepts are distinct then perceived service quality can be a predictor to resident satisfaction.

When the objectives are linked to the conceptual model which was described in the previous paragraph, the following figure can be described (see figure 7):

Figure 7: Aim and objectives related to the conceptual model



3 METHODS

This section describes the methods of data collection and analysis in this study.

The nursing home environment is a context in which vulnerable people are involved. This leads to ethical issues that are addressed in the first section of this chapter as is the approval procedure by the Research Ethics Panel of the University of Bradford. The measures taken to solve ethical issues that emerge when a study is carried out in a nursing home environment are also described. The following section describes the research population, the involvement of family members, the sampling of nursing homes and how the research was prepared in the nursing homes.

How the research was carried out is described in the section about the research methods, followed by a methodology section, in which the used research methods are justified. The data analysis procedures are described in the next section. This chapter ends with a description of the respondents' sample.

3.1 Ethical issues

Since this study was carried out in a nursing home, many ethical issues had to be solved before the actual data collection could start. Ethical issues occurred because of the vulnerability of nursing home residents and the sensitive issues that could be addressed while discussing the subject of service quality in nursing homes.

Vulnerable residents and consent

The research involves vulnerable residents who are in a dependent situation. It must be clear that the decision of residents to participate in this study was taken with full consciousness, that they were not forced to participate and that their full consent was obtained beforehand. Providing information about the research is the key in order for residents and family members to give their full consent. In every nursing home participating in this study, all residents and their family members (partners/children) were informed about the upcoming research, the way residents and family members were selected, how confidentiality was to be assured and that the results were anonymous.

Residents who are listed by the staff as verbally capable were called by telephone and asked if they wanted to participate in this research.

Before the interview began a consent form was handed over by the researcher to the resident and/or family members of residents with dementia. For each resident the consent form was read out loud and the resident was asked if he/she understood the content. If questions arose they were answered by the researcher. It was explicitly emphasised that the resident could withdraw from the interview at any moment even after signing the consent form. After signing the consent form the interview started.

Obtaining approval from the Bradford Research Ethics Panel

Before the research could be carried out, approval from the Research Ethics Panel of the University of Bradford was required. An application form was completed and sent to the Research Ethics Panel together with the research

proposal. This proposal was approved after a successful mini-viva and a description of the procedure to approach nursing homes, their residents, and the family members of residents with dementia.

The initial reply of the Research Ethics Panel was that there were twenty ethical issues that had to be addressed. The involvement of residents with dementia (which was not the case) was particularly attracting a lot of discussion. However, the Panel felt unable to approve the proposal because the research was to be carried out in the Netherlands. The Panel recommended that a Dutch Research Ethical Committee should review the proposal. Based on the Dutch approval the Bradford Research Ethics Panel would study the protocol used by the Dutch Committee to help make their decision in this matter. Since this study was to be carried out in the health care sector in the Netherlands (because all services in a nursing home are under health care regulations) the governing body of the Medical Review Ethics Committees (Central Committee on Research involving Human Subjects) was contacted. They reviewed the proposal and advised that the Medical Review Ethics Committee (MREC) be asked if the proposal was subject to the Dutch Law on Research involving Human Subjects (Wet Mensgebonden Onderzoek (WMO)). In 2011, the DBA programme of the University of Bradford was offered in conjunction with the TIAS/Nimbas Business School of the University of Tilburg. The MREC of the St. Elisabeth Hospital in Tilburg was contacted, since this is the MREC that reviews all the research proposals of the University of Tilburg that were possibly subject to the WMO. The MREC concluded that the study was <u>not</u> subject to the WMO

and therefore an MREC approval was not required (appendix 5). To address the issues of the Bradford Research Ethics Panel, Professor Jos Schols of the University of Maastricht was contacted. Professor Schols is a well-respected professor in the Netherlands in the field of nursing home medicine. His advice on how to solve the issues raised by the Bradford Research Ethics Panel resulted in an approval by that Panel six months after the first application. After re-reading the first application it must be said that the exclusion of residents with dementia was not very clearly stated in the research proposal and the procedure. This was clearly stated in the final application which led to the approval by the Bradford Research Ethics Panel (see appendix 6).

Confidentiality issues in approaching residents and family

The Bradford Research Ethics Panel wanted a robust assurance of anonymity to prevent negative consequences for the resident who might voice criticism.

It was not possible to meet this requirement because the help of nursing home staff was needed in order to select residents who are verbally capable to do an interview.

Because of the care needs, the interviews had to be planned in accordance with the staff, so that the resident had received care when the interviewer arrived.

In the qualitative area of the study, the interview was taped on an audio recorder. These tapes were destroyed after the interviews were anonymously transcribed.

In the qualitative area of the study, all questionnaires were anonymous including the resident questionnaires that were completed in the presence of an interviewer.

Feasibility statement by nursing home management

Although this research is not subject to the requirements of the WMO, it was advised to use a feasibility statement. In the feasibility statement the management of the nursing home declares that they have read the research proposal and the precautions to cover the ethical aspects and that the organisation is suitable to conduct the research in the nursing home. The statement must be signed by the manager of the nursing home or the Board of the organisation to which the nursing home belongs.

3.2 The research population

The resident's population

The criteria for the population of residents in this study are that residents are qualified for nursing home care according the ZZP-score (see chapter 1). This means that the residents have ZZP-score of 6 and higher. The residents must live permanently in the nursing home and are not residing there for rehabilitation or respite care (temporary stay to give informal carers relief). In

this study the selected residents are referred to as “residents with physical limitations”.

Family members as spokesmen for residents with dementia

Are residents with dementia able to express themselves in an interview about life events that brought them in to the nursing home? With this question in mind the researcher contacted nursing home physicians to find out if the family members of residents with dementia should be interviewed instead of residents with dementia. The answers received confirmed that people suffering from dementia who have qualified for a nursing home would be unable to answer the questions regarding the research subject.

This led to the decision to interview family members as representatives of residents with dementia.

This approach could cause a bias because the family members are in a sense an indirect data source who bring their own preconceptions and beliefs in the interview. However, despite this bias, no other solution to solve the inability of residents with dementia to participate in an interview was found.

In order to minimize the bias, family members are defined as the spouse of the resident with dementia, and when the spouse is not available, the children; because it is assumed that these persons are the closest to the resident with dementia.

Family members are selected when their loved one who lives permanently in the nursing home has a ZZP-score of 5 and higher.

Nursing homes sample

After approval of the Bradford Research Ethics Panel, the search for nursing homes to participate in this study started.

Access to a nursing home, the residents or family members is of more importance than having a representative sample of nursing homes because of the explorative character of this study.

The National Organisation for nursing homes, called ActiZ, wrote a support letter to help gain access to the nursing homes (appendix 7). ActiZ was particularly interested in the outcomes of this study because of the client perspective that is the reference of this study.

This was also the case with the National Platform for Client Councils (Landelijk Overleg Cliëntenraden (LOC)) who supported this study because of the client and family perspective (appendix 8). They were particularly interested in the expectations area of the study which identifies aspects in nursing home services that are seen as important to residents and family members.

Thirteen nursing homes were approached by telephone to participate in this study. Seven nursing homes responded positively and the proposal was sent to the Board of the organisation to which the nursing home belongs. Three nursing homes responded positively to the request to participate in both the qualitative and quantitative part of the study and four participate in the quantitative part. The planning of the qualitative part took place in the last quarter of 2011. Afterwards, this was not very well planned in the sense that most nursing homes were also in the middle of a mandatory quality review to

ensure that they would keep their accreditation. Because residents and family members were involved in this quality review, a participation in this study during these months would increase the burden on residents and family members too much, according to the management of the nursing homes. That is why the planning for the qualitative part was moved to the end of 2011. The quantitative part of the study took place from March to June 2012.

Preparing the research in nursing homes

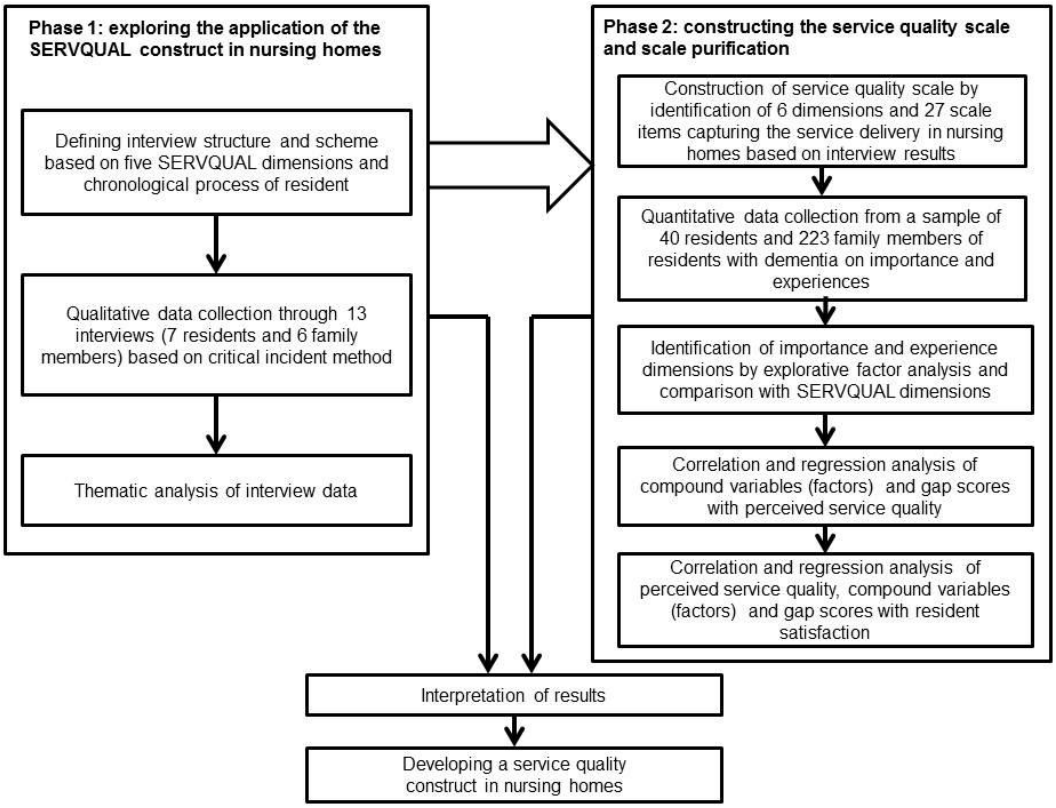
In preparation for carrying out the research in the participating nursing homes the following actions were taken: on receipt of a positive reply from the CEO or nursing home manager, an information set was sent to them with the research proposal, the procedure to follow, a time planning and a copy of the feasibility statement. This information was then discussed with the management team of the nursing home. After a positive reply from the management team a meeting was planned with the nursing home manager. In this meeting a time planning was discussed and agreed. After this meeting, an initial meeting was planned with the Client Council of every nursing home. The Client Council in a nursing home is a legal body based on a law that regulates participation of clients in the policy and business of the nursing home. This law requires consent of the Client Council to carry out any research in the nursing home. Since the Client Council meets only 4 times per year it was not easy to plan a meeting. During this meeting a presentation was given and questions were taken and answered by the

researcher. All Client Councils gave their consent to this research. After the consent of the Client Council the CEO or the nursing home manager signed the feasibility statement. After receiving the signed feasibility statement, the research was carried out in the nursing home.

3.3 Research methods

The following figure displays the summary of steps that were taken in developing the service quality construct in nursing homes and the sequence of research methods used in this study. This section describes the activities taken to carry out this study.

Figure 8: Summary of steps employed in developing the service quality construct in nursing homes



3.3.1 Phase 1: Exploring the application of the SERVQUAL construct

Aim

Phase 1 comprised 13 interviews to explore the application of the SERVQUAL concept in nursing homes. The aim of this phase was to understand the SERVQUAL model in the context of the nursing home and to construct a service quality scale by defining dimensions and scale items for service delivery in nursing homes.

Approach

The data for phase 1 were collected through face to face semi-structured in-depth interviews with nursing home residents with physical limitations and family members of residents with dementia.

However, special precautions need to be taken when interviewing vulnerable older people like nursing home residents. For example, when residents are unable to express themselves properly because their speech capabilities are affected by a stroke, interviewers must be able to handle the situation. Talking about their loved ones can lead to emotional situations. If interviewers do not know how to cope with emotions in an interview, it can be distracting for the interviewee. This can lead to tensions during the interview which can cause difficulty in the good conduct and follow through of the interview. Therefore the interviewer had a nursing background with working experience in a nursing home.

Measurement instrument

The measurement instrument (interview structure and scheme) was based on the five dimensions of the SERVQUAL model. The interviews were semi-structured and based on the chronological process of becoming a nursing home resident by addressing the different phases: the life event that causes the nursing home admission, the decision making process, expectations and experiences about service delivery and satisfaction about the nursing home. The interview focused on the following subjects:

- aspects of nursing home services delivery
- expectations, performance about service delivery in the nursing home from the residents point of view
- the perception of quality and the satisfaction of the resident about service delivery.

The results from the interviews were used to construct a service quality scale, consisting of dimensions and scale items, for the quantitative data collection in this study.

The focus in these interviews was on life events and critical incidents, and interviewees were asked about particular types of events. In this study these are the events that led to the move to a nursing home, events in service delivery related to expectations and experiences and events that illustrate (dis-)satisfaction about service delivery in the nursing home.

The interview scheme consisted of three parts: The first part was retrospective and addressed the expectations of the resident about the nursing home services prior to moving into the nursing home.

Questions in this part of the interview were:

- Can you tell me what event caused you to move to this nursing home?
- Can you tell me what expectations you had concerning the services by the time you were moving to this nursing home? Expectations in the sense of the nursing home as a solution for your personal problems experienced at home and the way the nursing home would take care of you as a resident.
- When you were visiting the nursing home to make a choice, what did they tell you that you could expect from them?
- Why did you choose for this nursing home? (If applicable, when residents have a choice between nursing homes)
- How did this affect your expectations about the accommodation and services that the nursing home?

The second part of the interview was addressing the expectations of the resident in the current situation living in the nursing home. Questions in this part of the interview addressed the five dimensions of the SERVQUAL model (tangibles, reliability, responsiveness, assurance, empathy) :

- Can you tell me a situation that illustrates that the service in this nursing home is meeting your expectations?
- Can you tell me a situation that illustrates that the service in this nursing home is NOT meeting your expectations?

The next two questions were trying to identify additional dimensions in service delivery in the nursing home:

- What kind of accommodation and services are important to you now you are living in a nursing home and why?
- Can you tell me what expectations you have about these accommodations and services as a resident?

The third part was about customer satisfaction. This is the most open part of the interview with one question:

- Can you give describe some events that illustrate the way you are feeling about the accommodation and services in this nursing home? In this part interviewees were asked to describe an event that could be characterized as “never again” and to describe one that could be labelled as “a great job”.

At the end of the interview the interviewee was asked to rate the overall satisfaction of this nursing home. The interviewer then handed the interviewee a sheet showing the rating level choices, as follows :

1 = very unsatisfied

2 = unsatisfied

3 = not satisfied, not unsatisfied

4 = satisfied

5 = very satisfied

The interview finished by giving the interviewee the opportunity to raise any personal point of view that they might wish to address.

Sample of interviewees

The manager of the nursing home was asked to compose a list of 10 residents with physical limitations who could be interviewed. Contact data (name, nursing unit, room number and telephone number of the unit) was supplied and the residents were from different nursing units. From this list only 4 residents were randomly selected. The reason only 4 out of 10 were selected is that the management would not know who was selected prior to the interview because the selection was not communicated with the management.

A letter was sent to these residents with a summary of the research proposal including the approval of the Bradford Research Ethics Panel and what they could expect when they decided to participate as an interviewee. A week later a follow-up telephone call was made to these residents. When the residents had agreed to participate, staff were then contacted to make an appointment, but were not told about the aim of the research, only that they were having an interview. It was necessary to contact staff to be sure that the client would be present and ready for the interview bearing in mind on-going care needs and activity programmes. Despite the fact that staff were not informed about the aim of the interview it cannot be guaranteed that the management would have heard of them which of the residents was interviewed.

The 7 residents who were interviewed were asked if they wanted to do the interview in or outside the nursing home. After the appointment was made a

letter was sent to them confirming the date and time of the interview. At the start of the interview a consent form was signed by the resident after the interviewer checked that everything in it was understood. After signing the consent form, the tape recorder was started to record the interview.

The sampling procedure of family interviewees was exactly the same as for resident interviewees. The family members were selected by the nursing home management because they were listed as the main contact of the resident listed. The difference between the two procedures was that the interview appointment was made directly with the family members without any contact with the nursing home staff. The 6 family members who were interviewed were asked if they wanted the interview at their home, at the nursing home or somewhere else.

Data management: processing of interview data

The interview recordings were copied on a USB flash drive and erased from the tape recorder. The USB flash drive was kept in a fire proof data safe.

The recordings were checked for quality and sent to a secretarial agency to transcribe the recordings.

The files of the recording were numbered and contained no names. The agency erased the recordings after producing the transcripts.

The first step was to check the accuracy of the transcripts by listening to the recordings while reading through the transcripts. On completion of this, the recordings were erased from the USB flash drive.

The second step was to structure the data in the sense that pieces of the transcripts were related to the questions. During the interviews the interviewee sometimes started answering a question by telling their life story which then contained possible answers to other questions.

The third step was to combine the field notes made by the interviewer with a description of the situation in which the interview took place: at home, a private room in the nursing home, sitting at the table or in a chair. It was also noted if the interviewee showed any emotion (crying, screaming) during the interview. If this was the case, the actual point when this happened is identified.

Analysis procedures

The interview transcripts together with the field notes and context descriptions were analysed through a thematic analysis. The thematic analysis method consisted of six steps (Braun and Clarke, 2006, p.87). During the first step of the analysis, the transcriptions were read and reread and initial ideas were noted down. In the second step the initial codes were generated by systematically going through the notes, listing them and trying to find similar initial codes in the transcript of each interview.

The third step was collating the initial codes into potential themes while in the fourth step the themes were reviewed. In this step the potential themes were compared to the concepts of the SERVQUAL model. In the fifth step the themes were defined and named. These themes were input for the sixth and final step that is carried out in phase 2: the construction of the service quality

scale for nursing homes (see figure 8). It was also used as input in the development of the service quality construct that is based on the outcomes of the analysis of the quantitative and qualitative data.

3.3.2 Phase 2: constructing the service quality scale and scale purification

Aim

The aim of this phase is to construct a service quality scale based on the results of the thematic analysis of the interview data and purification of this scale based on the statistical analysis of collected quantitative data through a questionnaire.

Approach

In phase 2 a structured questionnaire is constructed based on the original 5 SERVQUAL dimensions and the 22 scale items of the SERVQUAL questionnaire (Zeithaml, et al., 1990, pp.181-186) and was modified by using the results from phase 1.

By using a cross sectional design, the questionnaire was completed by residents and family members of residents with dementia. The residents were assisted in completing the questionnaire on their request. The quantitative data were analysed through a descriptive, factor and multiple regression analysis.

Measurement instrument

The questionnaire is a structured self-completing questionnaire using a five point value scale as used in the original SERVQUAL survey. However, because of the outcomes of the interviews, the Likert scale was modified for expectations to a more direct value as importance and for experiences to more direct values as good and poor both in a five point value scale. This differs from the original Likert scale where by statements respondents can score if they agree or disagree.

The questionnaire focused on the following subjects:

- Expectations of residents (and family members of residents with dementia) about service delivery in the nursing home
- Perceptions of residents (and family members of residents with dementia) of service delivery in the nursing home
- The perceived service quality
- The residents' satisfaction.

Based on the outcome of the interview results, the questionnaire consists of 6 dimensions instead of the 5 dimensions in the original scale (tangibles, reliability, responsiveness, assurance, empathy). One dimensions, system orientation, was added. System orientation is about how much service delivery is orientating on the organisation rather than the resident in other words: how much choice is a resident having in service delivery?

The 22 original SERVQUAL scale items were modified so it they would be suitable for use in a nursing home. Scale items were replaced, removed or added. This resulted in 27 scale items.

The design of the questionnaire had to be simple with easy to fill in questions. A five point multiple choice scale was designed. For every value on that scale a “smiley” was used so that the respondent had also a non-verbal symbol on the multiple choice scale.

All scale items were very short. The section in the first part of the questionnaire started with the phrase: “During the stay in a nursing home I find the following **important** in the care and services” followed by a sort description of items like “privacy” or “sincere interest of the staff in solving my problem”.

The second part of the questionnaire started with the phrase: “I **experience** the following in the care and services”.

For family members the phrases were adjusted in “During the stay in a nursing home I find the following **important** to my loved one in the care and services” and “I **experience** the following in the care and services to my loved one” followed by the items.

The questionnaire was piloted on face validity by an older person (over 80 years) and a partner and daughter of a resident with dementia. These persons were asked to give their opinion about the following issues: the clearness of the instructions, questions and scale items, eventually opposing questions, the layout (especially the use of “smileys”) and time to complete the questionnaire (Bell, 2005, p.147). Based on these outcomes, the instructions and some of the items were adjusted.

The final section of the questionnaire contains questions to the background of the respondent: age, gender, duration of stay in the nursing home and the

decision making process. The decision making process is about the process of deciding to move to the nursing home and the choice for this particular nursing home.

Sampling of respondents

The procedure to sample participants for the questionnaire in phase 2 differs slightly from the previously described procedure of selecting interviewees.

The management of the participating nursing homes listed all the residents with a physical limitation with a ZZP score of 6 or higher. In three nursing homes where the qualitative part took place the names of the interviewed residents were removed. A letter was sent to the listed residents with a summary of the proposal and a copy of the approval of the Bradford Research Ethics Panel. The letter was accompanied by a return form and a stamped return envelope. To make it easy for the residents, their name was printed on the form , so filling in their name was not necessary and they only had to send it back if they wanted to participate in the study. After receiving the form the resident was called to make an appointment to fill in the questionnaire. In case they needed assistance, a person to assist in completing the questionnaire would be available there. These persons all had nursing home experience and had a nursing or therapy background. They were given an instruction card listing the do's and don'ts in supporting the resident in the completion of the questionnaire. This was based on an article by Russell (Russell, 1999) which considered the interviewing of vulnerable old people in order to prevent bias when completing the questionnaire. They

also received information about the background of the resident they were assisting in order to be prepared for any situation, for example, a resident with a stroke who had difficulties in speaking.

The selection of family members was based on a list of the main contacts of residents with dementia; this was composed by the management of the nursing home. All the contacts on this list received a questionnaire with a stamped return envelope. To increase the responsiveness of the questionnaires an incentive was given to the respondents (Rudestam and Newton, 2007, p.115). Since the questionnaires are anonymous it was not possible to give a personal incentive. So for every returned and completed questionnaire € 5,- was donated to the Alzheimer Foundation. This incentive was clearly marked on the front page of the questionnaire.

Data collection

The questionnaire was anonymously completed by 40 nursing home residents with physical limitations and 223 family members of nursing home residents with dementia. No name or nursing home is mentioned on the questionnaire but through a secret coding the nursing home can be identified to calculate the response rate.

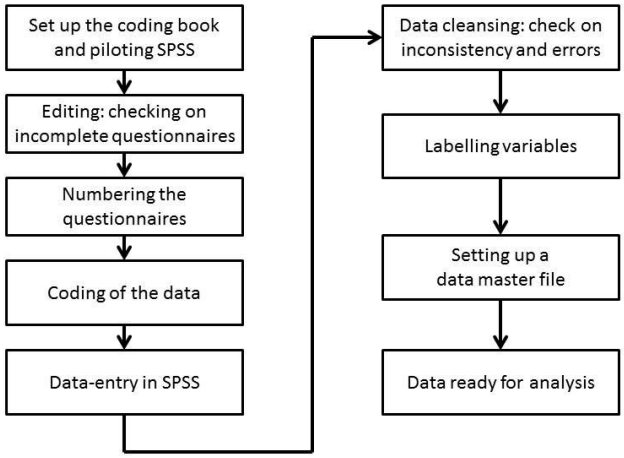
The nursing home residents who participated in this study completed the questionnaire in the presence of a person who was able to help them to complete the questionnaire if requested by the resident. After completion of

the questionnaire by the resident, the questionnaire was collected by this helper so the resident had no further involvement.

Data management

The management of the data retrieved from the questionnaire is displayed in the following figure:

Figure 9: Processing quantitative data



The first step was after the construction of the questionnaire the setup of a coding book and the piloting of the statistical programme, SPSS version 17.0. All answers on the items in the questionnaire were coded into a figure including missing values. The coding book was the foundation for the data file structure that is used as input for SPSS.

The second step was data editing: after the completion and return of the questionnaire, all questionnaire data were checked for completeness. Missing values were coded according the code book.

The third step was numbering the questionnaires: every questionnaire got a unique case number for identification purposes in the data file. After the numbering of the questionnaires was completed, the coding process started and the codes were entered into the data base file. The data entry was not outsourced to an external party but was carried out by the researcher, to get a “feel” for the data. The written remarks in the questionnaires were collected and entered in a separate remarks file combined with the case number in order to facilitate tracking the remarks back to the originating questionnaire. The remarks can give additional information about the respondents’ scores in the questionnaire.

After the codes and the remarks were entered in their respective files the questionnaires were destroyed in a paper shredder.

Data cleansing was done by checking the entered data for errors, like invalid values or empty cells, and to correct it accordingly.

After this file was checked, a so called master data file was put on a USB flash drive and put in a data safe a precaution for possible data crashes during analysis. The master file is also important when other researchers want to replicate the data analysis to check the findings. A copy of the data master file is the input file for the data-analysis.

Analysis procedure

The quantitative data were analysed with the Statistical Package for Social Sciences (SPSS) version 17.0. The data were analysed by an exploratory factor analysis to identify dimensions on importance and experiences. Scale

items that did not contribute significantly to the factor were left out. The outcomes of this factor analysis were compared with the original SERVQUAL dimensions. From each factor the reliability was tested. Based on this reliability test, factors with a low reliability were removed.

Gap scores between the remaining importance and experiences factors were calculated.

These factors were used as compound variables in a correlation and regression analysis with the variable “perceived service quality”. Factors with a significant contribution to the prediction of perceived service quality were selected.

It was analysed if the perceived service quality variable was a predictor for resident satisfaction by a correlation and regression analysis between these variables. It was also analysed if there was an intermediating variable on this relationship.

The outcomes of these statistical analysis are the input for the development of a service quality construct for nursing homes (see figure 8).

3.3.3 Interpretation of results and development of the service quality construct

The results of both the thematic analysis and the statistical analysis were placed side by side; the possibility of any relationship between the outcomes was then explored. The relationship could be either confirmative, illustrative or contradictory. This analysis of the relationship can provide guidance on how the results from both analyses can be interpreted. In this way the qualitative and quantitative methods are used as complementary methods.

When the results were confirmative of illustrative, they were selected as building components of the service quality construct.

When results were contradictory, the author tried to understand why they were contradictory. This could either be a difference in interpretation or dynamics in the nursing home context. Based on the findings from this analysis a conceptual model is constructed that reflects the service quality construct for nursing homes.

3.4 Methodology

Ontology and epistemology

Before describing the methodology, an important issue that had to be addressed is the ontological and epistemological reference of this research: the beliefs of how the world is made up, the nature of things and how knowledge about this world can be discovered. These are the fundamentals for the choice of methods in this study.

The ontological reference of this study is that the world or reality where a person lives is not objective but is a collection of individuals who experience their own reality. This experience is influenced by individual values, states of mind and body, past and present experiences and other individual related characteristics. In ontological terms: a social constructionist view sees reality as a construct of individual experiences and not as an objective: “constructionism rejects the claims of empiricism, namely that the use of the human senses can produce a certain or true representation of the external world” (Blaikie, 2007, p.23). This view supports the need for contextualisation

of existing service quality constructs to the nursing home environment. In a more specific way: the key elements of conceptualisations like SERVQUAL need to be understood in the context of a nursing home.

The value of a constructionist approach towards social life is that it questions the empirical social methodology in the sense is there is not an objective "real" reality and that the reality experienced by an individual must be preserved in the constructs of social life. Some social researchers (Vennix, 1996: 18) cite the Thomas theorem: "if men define situations as real, they are real in their consequences".

The consequence of Thomas' approach is that drawing conclusions from research data that can be generalized to the field of research is not possible. Individuals who are participating in the research must be seen as unique illustrations of social life.

That means that methodology in social research must be able to reconstruct individual attributions where results and conclusions are based upon.

However, objectivity from a constructionists view can be accomplished by critical inter-subjectivity (Fay, 1996: 212). Critical means in this context a close, systematic and careful examination of different and maybe rival methods in social research. Inter-subjectivity refers to a debate between researchers about their findings.

Reconstruction of reality without reducing individual specifications and critical inter-subjectivity have a great influence on the way data gathering methods of social data must be designed and executed.

Combined with the conclusion in chapter 1 that this study is considered a business research study, what are the consequences of this position for the view on organisations and the individuals who are acting there as a customer? For this study it means that the methodology must make it possible to gather both in-depth information about residents in a nursing home (contextualisation) and to collect large numbers of data in order to construct a service quality concept in a nursing home environment.

Complementary methods

The chosen approach is a mixed method approach in which exploratory qualitative interviews are followed by a quantitative survey. To understand the key concepts of the SERVQUAL construct in the nursing home context and the desired aim to gather large numbers of data in order to identify patterns in the applicability of the SERVQUAL application in the nursing home context, makes the choice of a mixed methods approach legitimate together with the need for in-depth information

The qualitative methods addressed the understanding of the SERVQUAL concept in a nursing home context and the construction of a service quality scale, while the quantitative approach allowed purification of this scale. Finally, both methods were used to develop the service quality construct.

There is a discussion about the use of the mixed methods approach in science. The argument against the mixed methods approach is that this violates the ontological and epistemological position of the researcher and is using different methodologies (Bryman and Bell, 2007, p.643; Johnson and

Onwuegbuzie, 2004; Rudestam and Newton, 2007, p.53). The research method is embedded in the views of the researcher on the world. So is a quantitative research approach linked to positivist world view and a qualitative approach linked to an interpretivist's world view. Quantitative and qualitative research methods are seen as separate paradigms that are incompatible with each other.

Despite this debate the mixed methods approach is gaining more support and can be seen as a third paradigm next to the qualitative and quantitative paradigms (Johnson and Onwuegbuzie, 2004).

The objectives of this study have both an exploratory and a descriptive character. By using a mixed methods approach different levels of service quality can be studied: qualitative measurement can address the micro-level (the individual situation of the resident) and quantitative measurement can measure the meso-level (the nursing home resident population). Findings on the micro-level can confirm findings on the meso-level and vice versa. A mixed approach in this study can address that "reality is multiple, complex, constructed and stratified" (Robson, 2002, p.43). A mixed approach makes the data "richer" and triangulation can be applied on the findings.

The outcomes of the qualitative part of this study have two functions: they give input for the construction of a scale to be used in and expand the meaning of the results of the quantitative part.

In the mixed approach there are parts where one of the methods is more dominant than the other.

The objective to validate the SERVQUAL dimensions and scale items for nursing home services has been carried out by a both a qualitative research method and a quantitative research method. The qualitative research method was used to give input to the construction of service quality dimensions and scale items for nursing home services while the quantitative research method was used to provide results to underpin this construction through statistical outcomes.

The objectives to explore that the disconfirmation paradigm is a foundation for perceived service quality in nursing homes and if perceived service quality functions as a predictor for resident satisfaction were studied with quantitative methods to gain input for statistical analysis.

Qualitative method: semi-structured interviews

Face to face interview is chosen above other methods such as telephone interviews for this study. The reason for this is that older people tend to prefer a face to face interview more than a telephone interview because of “failing sensory capacities of older people and their concerns about their performance” (Herzog, et al., 1983, pp.406-407).

Privacy is second reason for a face to face interview. Most nursing home residents do not own a telephone in a nursing home and call in a public space where staff and other residents walk in and out. This situation is changing because more and more residents get a cell phone provided by their family.

The third reason is that interviewing vulnerable older people raises the question of inequality during the interview: “it is not a conversation between equal partners” (Russell, 1999, p.407). A telephone interview leaves nonverbal indications of an experienced inequality behind because neither interviewee nor interviewer can see each other. In a face to face interview the interviewer can be proactive when he sees these indications.

Quantitative method: cross-sectional design

The quantitative method was based on a cross-sectional design using a self-completing questionnaire. A cross-sectional design is appropriate in this study because it is used to collect quantitative data on more than one case and on two or more variables (Bryman and Bell, 2007, p.55). This study requires large numbers of data in order to explore patterns that give indications about the service quality scale that was constructed based on the SERVQUAL conceptualisation and the outcomes of the qualitative part of this study.

The reason for choosing a self-completing, structured questionnaire is, besides the fact that this follows the original SERVQUAL measurement instrument, that sensitive topics can be addressed, comparable data can be collected, respondents can fill in when it suits them, limited time consuming and that a large number of respondents can be reached relatively easily when it is sent by mail (Robson, 2002; Bell, 2007).

3.5 Analysis procedures

Thematic analysis of interview data

The focus of the analysis of the interview data was to validate the SERVQUAL dimensions and scale items for service delivery in nursing homes. The analysis was carried out by a thematic analysis of the critical incidents in relation to the chronological process of the resident's "career" and the comparison of the dimensions and scale items in expectations and experiences with the original SERVQUAL dimensions and scale items (Zeithaml, et al., 1990, pp.181-186).

When using the thematic analysis method in this study the question can be asked if the thematic analysis is used in a deductive theory-driven or an inductive data-driven approach? (Boyatzis, 1998, p.29; Braun and Clarke 2006, p.81-82). The fact that the SERVQUAL scale is used as a reference model in this study provides themes in the context of living in a nursing home such as expectations, service dimensions like tangibles, assurance, reliability, responsiveness and empathy, and perceived service quality. On the other hand, exploration must not be suppressed by the reference model and that useful information from the interviews must not be missed. This places the researcher between the theory-driven and data-driven approach, something that is characteristic for a thematic analysis where coding is based upon prior research (Boyatzis, 1998, p.30).

The thematic analysis can be carried out on semantic or latent themes. To identify underlying concepts of service quality theories, it was obvious that the thematic analysis was analysed on both levels.

The semantic level referred to the existing SERVQUAL scale, while the latent level identified additional dimensions and items based on underlying emotions, ideas and conceptualisations (Braun and Clarke, 2006, p.84)

The critical incident method is suitable because it identifies what a resident finds critical and non-critical which gives indications of underlying references such as expectations (Bell, 2005, p.178).

Critical incident charts (Miles and Huberman, 1994, p.115) were made in which the process phases (life event causing nursing home admission, decision making process, expectations and perceptions and satisfaction) were linked to the mentioned incidents.

The coding of expectations and experiences of the interview data in the thematic analysis was according the SERVQUAL items in the different dimensions or added codes when necessary.

Statistical analysis of the questionnaire data

The analysis of the data was designed in relation to the research objectives.

Initially, descriptive and frequency procedures gave a feel for the overall way in which the respondents answered the questions.

A factor analysis was used to address the first objective to establish the dimensionality and develop scale items for service quality in nursing homes that are based on the qualitative findings from phase 1. The factor analysis constructed importance and experience factors which gave insight into how the formulated dimensions were holding in the nursing home context or that

other or additional dimensions would appear. The constructed factors were transformed into compound variables for further analysis.

The second objective was to explore if the disconfirmation paradigm was the foundation for perceived service quality. So the next step in the data analysis was to correlate the compound variables and the gap scores (experiences minus expectations) with the independent variable perceived service quality.

The third objective was to demonstrate that perceived service quality is a predictor for resident satisfaction. The third step in the data analysis is a regression analysis between the perceived quality variable and the satisfaction variable. Also the compound variables and gap scores that have a significance relation with perceived service quality are also subject to a regression analysis with resident satisfaction.

Since the data were collected in two different groups: nursing home residents with physical limitations and family members of nursing home residents with dementia, t-tests were executed in every analysis to check if there was significant difference in variances and means between the two groups.

3.6 Description of the sample

Phase 1: Interviewees sample

Seven residents and six family members from two different nursing homes. One nursing home had only residents with dementia so only family members were approached in this nursing home. One nursing home did not want to approach family members due to difficulties in previous research projects.

From the 8 approached residents all agreed to participate in the interviews, but one interviewee was overruled by her son, who was upset that he was not notified directly by the researcher. He said that his mother was not able to do the interview although she had agreed by herself to do the interview. So seven residents remained as interviewees. The residents were interviewed in the nursing home in their own room or a separate room on the unit where they were living.

In case of the family interviewees no one of the nursing home management knew who had been selected for an interview. Eight family members were asked to be interviewed. Two of the approached family members refused because of emotional reasons. It was too hard for them to talk about the situation of their loved one. One interview was cancelled due to illness of the interviewee and was replaced by another interviewee. Due to time constraints the other cancellations were not replaced. So six family members remained as interviewees. The family members were interviewed in their own homes.

The age of the residents range in age from 70 to 89 years. Their years of residency in the nursing home ranges from 3 months to 5 years.

The interviewed family members are five children and one husband. In two interviews the daughter and son in law were also involved in the interview. The years of residency of their loved ones ranges from 6 weeks to 10 years. All of their loved ones suffered from dementia.

Phase 2: description of respondents sample

Response rate

The approved data consisted out of 263 completed questionnaires.

Two resident questionnaires were not usable because during the completion of the questionnaire the resident became incapable. The response rate is displayed in the following table 1:

Tabel 1: Respondent rate

	Type of respondent				
Nursing home	**Resident returned (sent)**	**resp.rate**	**Family returned (sent)**	**resp.rate**	**Total**
Nr. 1	9 (24)	37,5%	26 (46)	56,5%	35
Nr. 2	8 (38)	21 %	38 (72)	52,8%	46
Nr. 3	N/A		36 (99)	36,3%	36
Nr. 4	2 (11)	18,1%	10 (25)	40%	12
Nr. 5	5 (20)	25 %	38 (67)	56,7%	43
Nr. 6	9 (46)	19,6%	32 (64)	50 %	41
Nr. 7	7 (38)	18,4%	41 (84)	48,8%	48
Unknown	0		2		2
Total	40 (177)	22,6%	223 (457)	48,6%	263

The response rate of 48.6% the family members can be considered as according the norm (Baruch, 1999, p.434). The resident response rate of 22.6% is low. The reason for this low rate can be that the nursing homes had finished a mandatory quality review in a time frame from 2-4 months before

this research. In this review the residents were interviewed. Taking into account, the fact that the questionnaire was 75 multiple choice questions long, the time to fill in the questionnaire was about 20-30 minutes, and the intimate nature of the questions, the response rate is considered very good.

Respondent's sample

The sample (N=263) comprises a cross-section of residents and family detailed in table 2.

Table 2: Respondent's' sample

Type of respondent				**Gender**	Residents	Family	Total
Resident	15.2%			Female	56.4%	69.5%	67.5%
Family	84.8%			Male	43.6%	30.5%	32.5%
Age (in years)	Residents	Family	Total	**Years of residency**	Physical	Dementia	
Mean age	77.7	59.3	62.2	Mean	2.6	2.7	
Minimum age	50	27	27	Shortest	0.2	0.1	
Maximum age	97	88	97	Longest	10	16	
Relation of family respondent to resident				**Origin**	Physical	Dementia	Total
Partner		8.6 %		Home	32.5%	59 %	54.9%
Parent		75.2 %		Care home	15 %	15.2%	15.2%
Sibling		2.3 %		Rehab centre	10 %	5.5%	6.2%
Other		14 %		Hospital	20 %	8.3%	10.1%
N=263				Diff. nursing home	17.5%	9.2%	10.5%
				Other	5 %	2.8%	3.1%

The number of females in the respondents population is much higher than the number of males. In the residents case it is obvious because women live longer than men. The nursing home population in the Netherlands contains almost three time more females than males (Garssen, 2011, p.26)

The average age of the resident participant is 77.7 years. The oldest was 97 years and the youngest was 50 years old. The average age of the family

respondent is 59.3 years. The oldest was 88 (partner) and the youngest was 27 years old.

Mostly the children of the resident with dementia filled in the questionnaire. The “other“ is specified in some cases as friend.

The average years of residency for residents with physical limitations is 2.6 years and for residents with dementia 2.7 years. The shortest stay for residents with physical limitations is 0.2 years which equals about 2-3 months and the longest stay is 10 years.

For residents with dementia the shortest residency is 1 month. This was a resident who just had moved into the nursing home and had been there for 1 month when the family filled in the questionnaire. The longest stay for a resident with dementia is 16 years.

Most of the residents come from a home situation when they move to a nursing home, though 15.2% of the residents come from a care home. There is however a slight difference: 56% of the residents with dementia come from a home situation while 30% of residents with physical limitations move in from a rehab centre or hospital. This indicates that people who suffer from dementia have a different “care path”. More people with dementia tend to stay at home as long as possible and then move directly into a nursing home than people who suffer from physical limitations. The reason for this is that physical limitations become clear after hospital treatment, or as the result of a rehabilitation programme, which necessitate nursing home admission.

Another observation is that residents with physical limitations tend to move more often to a different nursing home than residents with dementia. The

reason for this could be the preference for a private room, an issue that emerged strongly from the interviews.

3.7 Summary

The methods chapter has described the setup of this study. The research context of this study, nursing homes and their residents, is considered sensitive what was proved by the intensive and complicated approval process of the Research Ethics Panel of the University of Bradford.

The research population consists of residents with physical limitations and family members of residents with dementia.

The used research methods were interviews and surveys. The interviews were carried out in the first qualitative phase of this study, to explore the application of the SERVQUAL construct in the nursing home context. The five dimensions of the SERVQUAL construct have been used to structure in-depth interviews to explore the application of the SERVQUAL construct in nursing homes. The results of the thematic analysis of the data from the 13 interviews were used to construct a service quality scale in phase 2. This service quality scale was operationalized in a structured questionnaire. By a cross-sectional design, quantitative data were collected to purify the constructed service quality scale through 263 surveys (40 residents with physical limitations and 223 family members of residents with dementia).

The social constructionist reference supports the contextualisation of an established service quality construct in nursing homes. Therefore the two phase method approach in which qualitative and quantitative methods are

used as additional and compensating methods will result in in-depth information and large data collection to test constructions of service quality for nursing homes.

By statistical analysis of these data and triangulation with the outcomes of thematic analysis of the interviews, the service quality scale has been purified. This resulted in the development of a service quality construct for nursing homes.

The next chapter describes the results the data collection and data analysis of the two phases.

4 RESULTS

This section focuses on the results from phase 1, the qualitative part of this study and phase 2 the quantitative part. Section 4.1. addresses the results of phase 1 in which the application of the SERVQUAL model in a nursing home environment is explored for the development of a service quality construct. More specifically, it addresses the outcomes of the thematic analysis of the interview data from 13 interviews with residents with physical limitations and with family members of residents with dementia.

Section 4.2. describes the results of phase 2 in which the results from phase 1 were used to construct a service quality scale that was operationalized in a questionnaire. It also addresses a description of the survey data from 40 nursing home residents with physical limitations and 223 family members of nursing home residents with dementia. The purification of this scale was carried out by an analysis through multivariate analysis techniques, like a factor analysis and a multiple regression analysis.

This chapter concludes with a description of a service quality construct for nursing homes based on the results from phase 1 and phase 2.

4.1 Phase 1: the application of the SERVQUAL construct

The interview scheme was built along the different phases that a resident goes through until moving into a nursing home: first the life event that causes the nursing home admission, followed by the decision making process, the expectations and experiences about service delivery and satisfaction with the nursing home.

This section describes the results of the interviews in these different phases.

4.1.1 Analysis of interview data

Life events causing nursing home admission

Life events causing nursing home admission can be a sudden incident or a slow process that limits the person's ability of self-care in a way that nursing home care and services is needed. Both life events were present in the interviews.

These incidents must be distinguished from the process of ageing that causes frailty and vulnerability. The process of ageing itself doesn't cause the need for care in a nursing home.

In most interviews it was a sudden event initiating a process that led to having to move to a nursing home, both for physical and dementia reasons. These events varied from falling and breaking a hip, strokes, the sudden death of a spouse who had been taking care of his wife after a stroke, to dangerous situations caused by a decreased capacity of understanding because of dementia.

In one interview the resident suffered from Parkinson which slowly influenced the person's ability to take care of himself. The amount of care became so high that a nursing home was necessary.

In another interview the person suffered from dementia and started to walk regularly away from the care home she was staying in. The decision process to move her to a nursing home took a long time until the care home said they could not guarantee her safety anymore. In these interviews the nursing

home was already in an early stage a future perspective because of the nature of the disease.

One interviewee moved to the nursing home because of social reasons: he wasn't able to take care of himself as a person living alone with an alcohol problem.

Predominantly, different paths led to moving into the nursing home. Some interviewees said that they had gone straight from home to the nursing home, but most of the interviewees had been first admitted in a hospital sometimes followed by a stay in a rehabilitation centre, whilst others had moved into the nursing home from a care home.

The decision making process

The interview results show that the decision making process can be characterised as a complex and multi-layered process. It is complex because the decision affects the lives of the person involved and their families in a dramatic way. Emotions of guilt for family members and despair for the person because making the ultimate decision to move from their home is a very difficult decision to make. It is also complex because it is not one person who takes the decision but many people are involved (spouse, children, physicians). Finally, it is not an instant decision: it is either the last stage of a longer process of an increasing illness or a stage after rehabilitation that the person is confronted with the prospect of not living at home anymore.

It is multi-layered because the process addresses different levels of abstraction. It addresses the level of outcome " *so if I can take care of myself*

again, I go back home", the level of service delivery "*take care of him like at home*" and the level of quality of life "*take him away, because this part of what is to come…*". It is a negative choice to go to a nursing home. No one goes voluntarily and with a positive feeling to a nursing home.

The decision making process as described above is totally different from the decision making process in commercial service sectors where SERVQUAL originates. This supports the need of contextualisation of SERVQUAL which its founders are pleading for (Parasuraman, et al., 1993).

Choosing a nursing home

Once the decision was made, the next question was which nursing home to choose, if there is a choice. Some of the interviewees had no choice because of long waiting lists for their preferred nursing home and the availability of a room or bed at the current nursing home which wasn't their first choice. In other situations it was an emergency admission where the next available nursing home was selected.

When residents and their family members had a choice they put forward good arguments for their reason for choosing a particular nursing home. In a few interviews the home they were now staying in was not the preferred home. Another interviewee had been staying in a nursing home with shared rooms and had moved to this particular home because of the private room. Themes that came up in relation to choice were tangible aspects like the room (private or shared) and the location (close to children/relatives). Intangible themes that came up were previous experiences ("*her mum stayed*

there") and reputation that is seen as word of mouth: "*we heard it was a good home*".

Expectations about and experiences of the service delivery

The expectations about and experiences of the service delivery in the nursing home were discussed in the interviews along with the structure of the five SERVQUAL dimensions of tangibles, assurance, reliability, responsiveness and empathy.

The construct of expectations

The interviews focused on the meaning of the construct of expectations and experiences in the context of a nursing home.

There is a lot of discussion about the construct of expectations as used in the SERVQUAL instrument.

Teas (1993, p.18) states that the original definition of expectations in the SERVQUAL model were vague in terms of the meaning of "should".

In 1990, Parasuraman, et al. (!990, p.12) stated that expectations were normative in the sense that it represents an ideal standard of performance.

Carman (1990, p.49) raises the question of what the relationship is between expectations and importance? He pleads for a measurement on all three variables: importance, expectations and experiences. Interestingly Carman suggested that the expectations variable might be set to zero with first time customers of new services (pp.48-50) because expectations are based on past experiences.

This is also an outcome from the interviews in this research. Residents and family of residents did not have any expectations about the nursing home. It was the first time they were using the service of a nursing home. It was a negative choice, decided by others, often a sudden move to the nursing home and an attitude of acceptance of the current situation. The different paths that led to the nursing home as described in the previous section are very determinative for the expectations towards the nursing home. For some it is a shock to be suddenly in a nursing home, others think that it is a temporary stay and realise slowly that they will never return home and others don't want to move to a home "*where only old people live who do silly games*".

More specifically these residents do not develop expectations but only fear of losing the perspective of going back home. Once they realise that there is no way back and the nursing home is the only perspective that is left, they surrender and make the best out of it. There is a sense of acceptance in this, but also uncertainty about what the nursing home will bring them. This is not what the interviewees consider as expectations: "*I live in (…) and the nursing home has already existed for years. But none of us has ever been in there. We knew it was there but you didn't go there. We had no idea about what it was like to be in the nursing home*".

When family members were asked about their expectations of the nursing home they pointed out that they expected that: "*they take care of him like at home*". There are no specific expectations but only this general notion.

Also the dramatic nature of the decision making process to move to a nursing home without another option is not gaining expectations about the stay in the nursing home. The decision is actually a negative choice. Therefore the word “expectations” was not used by the interviewees but rather descriptions that can be grouped under the theme “fear”. Family interviewees pointed out that they had had no former view of the nursing home and did not know what to expect. That made them fearful in the context of a negative choice. Discussions about expectations along the lines of the SERVQUAL dimensions were not effective in the interviews, because interviewees had no clear image of expectations so a distinction into these five dimensions couldn’t be made. Interviewees refer to words as *“being happy”* and *“cared for like at home”* while discussing expectations. In the transcripts of the residents interviews there is also no sequence in the expectations and experiences part. It is a story of events in which subjects of thoughts before moving to the nursing home and experiences are intertwined. In the analysis these events were structured afterwards into the five SERVQUAL dimensions to identify scale items for the service delivery in nursing homes.

Instead of expectations the word “important” or the phrase “of interest” was used by family members. Interviewees, both residents and family, could easily point out what they found important in the daily life in the nursing home.

Therefore, the term “importance” is used as a replacement for “expectations” in this questionnaire.

Tangibles

According to the interview results, the room and the building played a role in the choice for a nursing home, but was not a dominant factor in the daily life for a resident in a nursing home. Instead of a private room, privacy was a theme that came up as an important element that could include a private room but was not essential.

Modern looking equipment was not mentioned in the interviews as an important theme except by one interviewee who mentioned that the bed was disturbing her because of its appearance "*I had a room where those things were not present* (pointing to the handles of the bed to pull it up or down). *These are creepy things*"

A good variety of food and drink to choose from was another theme that came up as an important tangible in nursing home services. A daily choice of menu is seen as desirable by residents. Family members of residents with dementia find it important to have good food so that their loved ones stay in good physical condition, but a wide array of food and drink is, according to them, too much because "*my father is unable to choose because of his dementia*".

Materials associated with the service like brochures or statements did not play a role in the service provision of the nursing home or in the decision making process. Websites or comparing information between nursing homes, which is available in the Netherlands, was not mentioned as an element that influences the service quality.

Reliability

Providing services in a promised timeframe is an important theme: the promise from the staff: “I’ll be there in a minute” when a resident calls, followed by a 30 min. waiting time plays a major role in the daily life in the nursing home especially when you need to go to the toilet: “*If my mum signals that she wants to go to the toilet, nobody notices! The bell lies on top of the wardrobe or on top of the microwave. Residents cannot even see the bell, so they cannot reach it. My mum cannot walk two steps by herself so she is also not able to go to the toilet by herself”.*

Residents in nursing homes understand that the staff is busy and that they have to wait. Once the resident or family have called they must rely on the staff to respond to the call.

That the service is not performed right the first time by the staff is not of concern for residents and their family. This is probably because the service is continuously in a nursing home, so there are lot of opportunities to correct failures in the performed service by the staff which is different from services that only have a short encounter between provider and customer. However residents have to ask multiple times before the staff do anything: “*I have asked it several times. I am still waiting*”. That bothers residents and family.

Assurance

Assurance in the nursing home came up in the interviews in two perspectives. The first is theft of possessions. Jewellery, clothes and other

belongings often disappear in nursing homes. This can be theft or in the case of dementia, that things disappear because the resident forgot where it had been put. Family takes possession of jewellery to prevent loss, but what bothers them is that clothing often disappears after washing: "*new clothes are being stolen also from others. That is why the sister of the resident is doing the laundry. Trust is gone. Hopefully this will improve"*. Family members think that the nursing home should take precautions to prevent this. The second perspective is that of being confronted with dying or deceased residents in the nursing home. Especially in a shared room when the roommate is dying it can be very disturbing for the resident: "*they shouldn't allow a man to be with a dying person*". Also the way the deceased are taken away can be confronting especially when other residents are not informed of the death of a resident they knew.

Dignity is an important theme for both residents and family members in situation where a person is dependent on the staff. Politeness and respectfulness are mentioned aspects in the interaction between resident and staff: "*They talk across me when they wash me about what they experienced the night before. They do not acknowledge my presence.*"
Clothing was also an aspect in this respect that came up in the interviews. Attention paid to how the residents were dressed and following the choice of the resident's family in the case of dementia was seen as a major contribution to the dignity of their loved one.

Responsiveness

The operations of the daily services in a nursing home have a routine schedule. However, it doesn't mean that you do not have to inform the resident or the family what is going to happen that day as is experienced by many of the interviewees. Giving information about the daily program including recreational activities is seen as important.

An instant response to a resident's request/demand is seen as an important factor, because the 24 hour availability of care and services is the main reason for a person to move to a nursing home.

Residents and family find that the staff is often very busy. They understand that there is not always time to response instantly to requests from both residents and family, but taking the time to respond instead of not responding at all is something interviewees find as minimal: *"Keeping promises and immediate response is equally important*".

Empathy

Empathy can be categorised in different themes.

The first theme is easy making contact with the physician in the nursing home in case a resident or their family have questions do not feel comfortable about the physical situation. Many interviewees experience that there is no or hardly any contact with the nursing home physician. Once there is contact, the nursing home physician is not always responsive to what family members are saying. This is illustrated by an event described by an interviewee in which the daughter, a registered nurse, sought contact with the

physician about catheterising her father. Her father needed a monthly change of the catheter and every time this was changed, he got a bladder infection. To prevent this the medical specialist advised to give her father some antibiotics on the night before the catheter was changed. When her father moved to the nursing home she told this to the nursing home physician. He responded irritably and said that this was not according to his medical policy. After several attempts the daughter let it go but remained very concerned about her father.

Access to and participating in activities during the day was also seen as an important theme. Activities play an important role for both residents and family members. Activities break the day, prevent boredom and promotes contact with other residents which prevents loneliness.

Time spent with the staff discussing any difficulties the resident may have, either by the resident or their family is seen as very important. By doing this, family members expect that their loved ones are better understood in their needs and behaviour. This is illustrated by a remark of a spouse: "*there must be more attention to mental health. The staff have been more educated in physical care (bathing, food, drink and medication) than dealing with patients with dementia. How do you give attention to a woman with dementia who is looking for her little children or who thinks that "her" living room is full of strange people? She is so restless in the afternoon so provide more sedative medication? I do not know but it is a major concern to me*".

In the service sector the service delivery functions as a solution for a concrete problem or need. This is mostly a mono-dimensional problem, like a

washing machine that has to be fixed or a dinner that is served. According to the interviewees the goal of the services in nursing homes must be to keep the quality of life of the resident as high as possible. This is a complex concept that is different for every individual and cannot be described by a protocol or by an instruction card. The outcome of the service delivery is the way the resident or family experiences the contribution of the service delivery to the quality of life, or as some residents say the "*happiness*" of themselves or of their loved one.

The original SERVQUAL questionnaire says that excellent companies understand the specific needs of their customer. Translation of specific needs into the nursing home context came up in the interviews as meeting personal habits or lifestyle, giving comfort when the resident is sad or lonely and stimulating contact or companionship with other residents to prevent loneliness.

Satisfaction

At the end of the interview the interviewees were asked to score their satisfaction on a card that rated the satisfaction from 1 (very unsatisfied) to 5 (very satisfied). The interviewees rated on the satisfaction scale mostly 4 to 5 although some interviewees were unsatisfied. Some residents found it difficult to say when they were not satisfied: "*I am a little unsatisfied, not satisfied. But we will not say so".* The interviewees experienced this question as difficult. Two indications occurred that suggest that. The first one is that if a sense of non-satisfaction is mentioned, the interviewees tend to score

higher to avoid confirming non-satisfaction. This could be an indication that the five point scale is too coarse for them and they would like to see more gradual scores. The second indication is that they are very satisfied with some aspects of the service delivery while they think other aspects are really awful while in their overall comment they find it satisfactory.

The influence of structure and process

One aspect that is not included in the SERVQUAL conceptualisation came up as an issue that bothered residents and in some interviews also family members. That has to do with living your life according to your own lifestyle and rhythm. People who are dependent are in need of support from others to do what they want to do. When people are living in an institution like a nursing home, they have to live by the "rules", according to the interviewees. These rules are determined by the organisation of the primary process in the nursing home and is not according the way the resident wants. Examples of these rules are the bed and meal times, when residents can go outside or what clothes they want to wear: "*They were sitting up watching television and then it was: now to bed. Sometimes I thought: this is normal, that you are put to bed at eight o'clock".* One interviewee has not been outside for three years. According to him he asked many times if it was possible to go with a staff member for a walk. He gave up and stayed inside. Although residents are permitted to go outside, when they want to they have to rely on family members or volunteers. The "system" is not equipped to go outside with a resident for a walk because of the staff planning. This can be due to too low

staff capacity or priority been given to other activities. There are also other opinions especially from family members: they say that their loved ones need a structured day because they are not able to structure it themselves due to dementia. They feel happy with the structure and think that this is what their loved one needed: "*It is hard for people with dementia to make a decision. There must be regularity and order*". However, there is a difference between a "one size, fits all" principle and the individual needs and choices of a resident or in other words, the "system orientation" of the nursing home. The balance between these probably determines the quality of the service delivery. Therefore it is important to measure these aspects in the next phase.

4.1.2. Summary of results of phase 1

Phase 1 has explored the application of the SERVQUAL concept in qualitative interviews. The outcomes of these interviews are the input for constructing the service quality scale in the next phase.

The first important outcome is that expectations are a difficult concept in the context of a nursing home. The negative nature of going to a nursing home, the different paths that lead to a nursing home (from home or elsewhere), not knowing what a nursing home is and sometimes the speed of moving from home into a nursing home, makes it difficult to develop expectations. The expectations stay vague and instead of it, the interview results give notion that residents and family members know what is important to them in their daily life. Therefore importance is a better understood concept than expectations in the nursing home context.

The second important outcome is that the five dimensions of the SERVQUAL construct were present in the interviews but only after analysis of the interview transcripts. Interviewees do not experience a clear distinction between these dimensions. After the thematic analysis it became clear that two important aspects were missing in the SERVQUAL conceptualisation that are of relevance in the nursing home. These are the way the decision to move to the nursing home was made and the way the operations are organised. These aspects are influencing the choice of residents and are named “system orientation”. These aspects are added in the scale.

The third important outcome is that satisfaction is a multi-complex concept that is very difficult to measure. To understand the background of the satisfaction rate by a resident or a family member, the relationship with the items on the service quality scale has to be analysed. Secondly, the respondents in phase 2 must have the chance to give a balanced judgement about satisfaction.

4.2 Phase 2a: construction of the service quality scale

4.2.1 Construction of the questionnaire

The questionnaire is a modification of the SERVQUAL questionnaire (Zeithaml et al., 1990). The modifications are based on the results from the interviews with residents and family in the qualitative phase of this study.

Dimensions

The five dimensions in the SERVQUAL questionnaire are tangibles, reliability, responsiveness, assurance and empathy.

Related to the first objective of this study, to establish the dimensionality and develop scale items for service quality in nursing homes, a sixth dimension was added which is “system orientation”. In the interviews it was determined that the possibility to direct your own life is under pressure in the nursing home context because the service activities are structured in a system that can dominate the daily life of residents. System is in this context the planning of activities, procedures and protocols. The amount of personal space and choice depends on the system orientation of the nursing home. This was ground for the addition of “system orientation” as sixth dimension in the questionnaire.

Also the decision making process is added as a subject in the questionnaire to measure the way, how, and by whom the decision was made. This dimension contains aspects as the decision maker, where the resident came from when moving into the nursing home, the ability to choose between nursing homes and the criteria as foundation for their choice.

Questions

One of the outcomes of the interviews was that the concept of “expectations” is difficult for residents and family members to understand, but are able to know what is important in the daily their life or that of their loved ones. The

unit of analysis was the individual resident or the family member. So the phrase “excellent companies will have …” in SERVQUAL (Zeithaml et al., 1990) was adjusted to “importance” and the formulation of the questions refers to the individual level of the resident.

So the general question in the residents’ version questionnaire is formulated as follows: “during the stay in a nursing home I find the following **important** in the care and services”.

The original thought was that family members should function as a spokesperson of their loved one. The question was first formulated as “during the stay in the nursing home I think that my loved one finds the following important in service and care”. This question caused confusion because during the test of the questionnaire the family members of a resident with dementia, said that they did not know what he found important because his ability to have an opinion was not clear because of severe dementia. So instead of asking how they thought he would think they said that their opinion had to be measured.

So in the family version of the questionnaire the general question was formulated as follows: “during the stay of my loved one in a nursing home **I** find the following **important** to my loved one in the care and services”.

To facilitate the resident and family respondents the scale items were kept as short as possible. The general question was followed by 27 short formulated items like “privacy” (see appendix 9 and 10).

Items

The items have to address the specific situation in the nursing home and must be comprehensible for residents. The items that were formulated are based on the interview outcomes and categorised in the six dimensions mentioned in the previous paragraph.

The items are put in a statement style on which respondents give their opinion in terms of how they feel about the statement.

Every item is one dimensional to avoid two different questions in one item.

The wording in the items is neutral to avoid bias in the judgement about the item: no negative wording except for item 5 (no errors in care and services) and 13 (avoids confronting residents with dying or deceased persons).

In the following table the formulated items are put next to the original SERVQUAL dimensions and items. Some items are SERVQUAL alike, like “neat staff appearance” others are nursing home specific like “access to the physician”.

Table 3: modification of SERVQUAL items

DIMENSIONS	SERVQUAL	MODIFICATION	QUESTIONNAIRE
Tangibles	1.Excellent companies will have modern-looking equipment	*Modified to privacy as an effect of a private room, because a private room plays a role in the decision making process but not in the daily service*	1. Privacy
	2.The physical facilities of excellent companies will be visually appealing	*Physical aspects of services are food and drinks. Excellent nursing homes offer a choice in food and drinks. The item is modified accordingly*	2. A variety of food and drinks that I can choose from
	3. Employees at excellent companies are neat-in appearance		3. A neat staff appearance
	4.Materials associated with the service (such as pamphlets or statements) will be visually appealing in an excellent company	*The situation of moving to a nursing home can be long or can be a sudden event. In both situations it is a confusing event for resident and family in which brochures or a mission statement do not play a role*	N/A
Reliability	5.When excellent companies promise to do something by a certain time they do so	*From the interviews: the promise from the nurse: “I’ll be there in a minute” when a resident calls followed by a long waiting time plays a major role in the daily life especially when you want to go to the toilet.*	4. When the staff promises to come to me within a certain time frame they do so
	6.When a customer has a problem, excellent companies will show a sincere interest in solving it		5. When I have a problem, the staff shows a sincere interest in solving it
	7.Excellent companies will perform the service right the first time	*From the interviews: residents have to ask multiple times to get things done. Item is modified accordingly.*	6. I do not have to ask things twice to get my problem solved
	8.Excellent companies will provide their services at the time they promise to do so	*Within the nursing home the difference between “by” and “at” a certain time is not present, because residents are already in the providers sphere while in other services customers have to come to the provider or the provider comes to their home*	N/A
	9.Excellent companies will insist on error-free records	*Reputation is an aspect that plays a role in choosing the nursing home*	N/A

DIMENSIONS	SERVQUAL	MODIFICATION	QUESTIONNAIRE
Responsiveness	10.Employees in excellent companies tell customers exactly when services will be performed	*Operation of services in nursing home have a routine schedule.*	7.The staff informs me what is happening during the day
	11.Employees in excellent companies will give prompt services to customers	*From the interviews: instant response is important when a resident makes a request*	8. The staff responds instantly when I am calling
	12.Employees in excellent companies will always be willing to help customers	*In a nursing home residents are not waiting at a counter to be helped with their needs*	N/A
	13.Employees in excellent companies will never be too busy to respond to customer requests		9. The staff is never too busy to respond to my requests
Assurance	14.The behaviour of employees in excellent companies will instill confidence in customers		10. The behaviour of the staff gives me confidence that they can handle my situation
	15.Customers of excellent companies will feel safe in their transactions	*From the interviews: safety in a nursing home is related to theft and confrontation with death. Item is modified accordingly.*	11.There is no theft in the nursing home
			12.The staff avoids confronting residents with deceased or dying persons
	16.Employees in excellent companies will be consistently courteous to their customers	*From the interviews: politeness and respect from the staff to the resident are important attributes in the nursing home.* *Item is modified accordingly.*	13. The staff is polite to me 14. The staff shows respect to me
	17.Employees in excellent companies have the knowledge to answer customers' questions		15. Every staff member can deal with my questions

DIMENSIONS	SERVQUAL	MODIFICATION	QUESTIONNAIRE
Empathy	18.Excellent companies will give customers individual attention	*Care is in itself an individual activity between resident and staff, so this item makes no sense in a nursing home*	N/A
	19.Excellent companies will have operating hours convenient to all their customers	*This makes no sense in a nursing home because they operate 24/7 . Modified by outcomes of the interviews:* *- access to the medical staff is experienced as a problem* *- activities during the whole day, not only during the morning or afternoon* *Item is modified accordingly*	16.Easy access to the physician 17. Activities during the whole day
	20.Excellent companies will give customers personal attention	*In the nursing home personal attention is scarce because the staff argue that there is no time. Item is modified accordingly.*	18.Time to talk with me about what bothers me
	21.Excellent companies will have the customers' best interests at heart 22.Excellent companies will understand the specific needs of their customers	*The stay in a nursing home is caused by a problem that affects the quality of life. This statement is translated to nursing home by relating problem to quality of life* *Needs are translated into needs of residents in nursing homes:* • *meeting personal habits* • *comfort* • *companionship*	19. The staff tries to keep the quality of my life as high as possible. 20. The staff reckons with my personal habits (lifestyle) 21.Comfort when I am sad or lonely 22.Companionship with other residents
System orientation	N/A	*This dimension was added because residents experience a high dominance of the way services are organized in the nursing home (system dominance)*	23.Involvement in the decisions about me 24.Can decide my own bed times 25.Can decide about my own meal times 26.Can decide what clothes I want to wear 27.Can decide when I want to go out

The questionnaire consists of 27 items, five more than the original SERVQUAL questionnaire.

These 27 items must be rated twice by the respondents. One to measure their expectations and one to measure their experiences.

After the respondent has rated the items the respondent has to rate two overall questions about satisfaction. These questions are: “how does the nursing home meet your needs?” and “How do you feel about this nursing home?”. The scores on this question can be related to the gap between importance and experiences.

In the final section of the questionnaire twelve general questions were added, to identify the personal background of the respondent. In the interviews the decision making process, the origin of the resident prior to the nursing home and the criteria for choosing the nursing home were mentioned as important items. These were also added in this general section of the questionnaire.

Measurement scale

The scale is structured because the outcomes of the questionnaires must be comparable in a quantitative research like this. It is also convenient for the respondents because it is easy to fill in and takes less time than an open question questionnaire. The scale that is used is a summated rating approach (Robson, 2002) (Likert scale) which is also used in the original SERVQUAL questionnaire.

It is a proven approach that not only measures the opinion about statements but also the strength of that opinion (Robson, 2002, p.298). The five points scale is used to give the respondent the opportunity for nuance in their answers, but avoids a too detailed or too rough opinion.

In the importance section the following five point scale was used: very important – important - no opinion – slightly unimportant - unimportant. In the experience section the five point scale was formulated as follows: very good – good – average – poor - very poor. Using these scales makes it easier for older people to give their opinions. The original agree – disagree scale requires statements that need to be formulated which involves a lot of reading. The amount of items that need to be rated twice could be a burden for older people. Perceived service quality is represented by the disconfirmation between expectations (in this study “importance”) and experiences. But the disconfirmation cannot be calculated properly because the importance and experience scales are different. Therefore, a separate question was put in the questionnaire about perceived service quality: “how do you perceive the quality of the service delivery in the nursing home?” using the five point experience scale.

More nuance was needed from the interviewees for a balanced satisfaction rating. The interviewees tended to avoid negative statements in their scores. So in the questionnaire a seven points scale was used to rate satisfaction to give them the opportunity to score a balanced judgement.

Same questionnaire, two versions

The unit of analysis is the individual resident of a nursing home. Residents with dementia are not included in this research but their family is which means that the expectations and experiences of the family of the resident with dementia are measured.

The bulk of the questionnaire is the same for residents and for family of residents with dementia. However, adjustments had to be made to make the questions more understandable for family. An example: item nr. 6 is “Staff is there when I need them” is in the family version of the questionnaire: “Staff is there when my loved one needs them“. The questions were kept as identical as possible in both versions.

4.3 Phase 2b: purification of the service quality scale

Introduction

This section describes phase 2 the purification of the constructed service quality scale that was based on the SERVQUAL construct and the outcomes of the interviews.

This section describes analysis of quantitative data, collected from 40 resident surveys and 223 family member surveys. This section starts with the frequencies of the variables, followed by the outcomes of a factor analysis and ends with a regression analysis. The description of the variables follows the process of the resident and starts with the process of making the decision to move to a nursing home followed by importance and experiences.

The decision making process

The decision making process was an important aspect that came out of the interviews in the qualitative phase. In the questionnaire three questions were regarding the decision making process. One question was: “who made the decision to go to a nursing home?”. A second question was, that when the decision was finally made, whether there was a choice between nursing homes (“did you have multiple options for choosing a nursing home?”). The final question was that if there was a choice between nursing homes which aspects (reputation, previous experience, location, the room) were considered as the most influential aspect of the choice to move to this particular nursing home.

In who made the decision to move to the nursing home the physician was in 35.9% of the resident cases the one who had made this decision as family and the resident were less experienced as the decision maker (table 4).

In 7.7% of the cases the physician is involved together with the family in making the decision. This gives the physician an influential position in the decision making process according to residents.

Table 4: Main decision maker

Decision maker	Residents (n=39)	Family (n=219)	Total
Self	9 (23.1%)	60 (27.4%)	69 (26.7%)
Family	12 (30.8%)	61 (27.9%)	73 (28.3%)
Friends	-	1 (0.5%)	1 (0,4%)
Physician	14 (35.9%)	58 (26.5%)	72 (27.9%)
Physician and family	3 (7.7%)	23 (10.5%)	17 (10.1%)
Others	1 (2.6%)	16 (7.3%)	26 (6.6%)
N=263			

In 55.3% of the family respondents the decision maker is the respondent self or in conjunction with other family members. 26.5% of the family respondents see the physician as the decision maker and in 10.5% the physician is involved with the family. The physician is seen as an important person in the decision making process by the family respondents: "*You never decide on your own to move to a nursing home. It is always the family with the physician*".

4.3.1 Aspects influencing nursing home choice

Overall, 163 (62%) of the total respondents (N=258) reported that the resident or the family had a choice between nursing homes. There is a difference between resident and family respondents: 19 (48.7%) of the resident respondents (n=39) answered they had a choice between nursing homes whilst 144 (65.8%) of the family respondents (n=219), about a third higher. This can be explained by the finding in the qualitative phase that most residents with physical limitations often come from a hospital or a rehabilitation centre to the nursing home. The hospital or rehabilitation centre can propose a related nursing home to their patients which limits their choice.

The following table displays the frequencies of the variables that measure what aspects have influenced the choice for the current nursing home.

	Table 5: Variables influencing choice						
	Very Important	**Important**	**no opinion**	**slightly unimportant**	**un-important**	**Mean**	**SD**
			Location				
n=143	n= 59 (41.3%)	n=63 (44.1%)	n= 9 (6.3%)	n= 10 (7%)	n= 2 (1.4%)	1.83	.927
			The room				
n=139	n= 39 (28.1%)	n=70 (50.4%)	n= 13 (9.4%)	n= 13 (9.4%)	n=42 (2.9%)	2.09	1.003
			Reputation				
n=137	n= 37 (27%)	n=65 (47.4%)	n=29 (21.2%)	n=4 (2.9 %)	n= 2 (1.5%)	2.04	.856
			Previous experience				
n=129	n= 18 (14%)	n= 40 (31%)	n= 6 (46.5%)	n=4 (3.1%)	n= 7 (5.4%)	2.55	.960
N= 163 (respondents with choice)							

From this table it can be read that the location is the most important aspect that led to the choice of the nursing home. 85.4% of the respondents who had a choice of nursing home found location an important aspect. It had already become clear from the interviews that location was key because residents and family, especially spouses and children want to stay close to their loved ones so that visits can be made easily throughout the week.

To 78.1% of the respondents the room is key for the choice of a nursing home and to 74.4% of the respondents reputation is an important aspect in their choice of nursing home. It is notable that reputation is almost as important as the room. Many nursing homes see the room and the building as the most important aspect to attract residents. However there can be a difference between residents with a physical limitations and family members of residents with dementia. Both Levene's test for equal of variances and a t-test for equality of means show that there is no significant difference

($p < 0.05$) between these two groups regarding the importance of the choice variables reputation, previous experience, location and the room.

Since the decision making process was seen as an important part in the process of choosing a nursing home, the question arises as to whether the different aspects that led to the choice for the current nursing home have a predicting ability to perceived service quality and ultimately how respondents feel about the nursing home. The grounds for the choice of nursing home can be interpreted as expectations. When for instance reputation is key for the choice of nursing home, then it can be expected that it ultimately influences the judgement about the nursing home. To test this, the four choice variables were correlated with perceived quality.

From the following table it can be read “reputation” and “previous experience” have significant correlations with perceived service quality but the Pearson coefficients have low values which reflect a weak relationship.

	Table 6: Correlation between choice variables and perceived quality		
	Choice variables	**Pearson’s r**	**Sig. (2-tailed)**
		Perceived quality	
n=128	Reputation (n=128)	.268	p =.002
n=121	Previous experience (n=121)	.244	p =.007
n=134	Location (n=134)	.123	p =.157
n=130	The room (n=130)	.062	p =.483
N=163 (respondents with choice)			

Given the weak relationships with perceived service quality, the choice variables are no longer involved in further analysis.

4.3.2 Objective 1: To establish the dimensionality and develop scale items for service quality in nursing homes

To establish the dimensionality and develop scale items in nursing homes, the dimensions from the SERVQUAL concept such as tangibles, reliability, responsiveness, assurance and empathy in nursing homes were adjusted, based on the outcomes of the qualitative phase in this study. The adjustments were the adding of a sixth dimension: system orientation, which was meant as the way the service quality is influenced by the organisation process and was measured through four scale items. The original SERVQUAL scale items on these dimensions were adjusted to meet the nursing home context and the outcomes of the qualitative phase.

The scale items were measured twice: as an importance variable, how important the respondents see the items in the service delivery in the nursing home and as an experience variable, how the experience of the service delivery was on this item according the respondent.

The data on the variables representing these dimensions were analysed through a factor analysis. The factors were extracted with Principal Component Analysis (PCA) followed by a Varimax rotation with Kaiser Normalization.

<u>Importance factors.</u>

The 27 importance variables were analysed through the PCA to identify factors. A Kaiser-Meyer-Olkin Measure (KMO) was run to test the sampling adequacy. The KMO was .836 which is much higher than the minimum of .5

(Field, 2009, p.660). A Bartlett test was run to check the spherity. The significance was Sig < .001 with a df = 325.

These results have confirmed that the conditions for running a factor analysis were present. Therefore a factor analysis was carried out. Factors with eigenvalues < 1 were removed.

The number of factors was set to six to compare it with the dimensions as they were constructed based on the output of the qualitative study. Also a five factor analysis was run to compare the results.

The 5 factor structure and the 6 factor structure were compared.

The communalities scores were relatively low (< 0.7) in both structures. This gives an indication that the factor structure depends more on the sample size than a factor structure with high communalities (MacCallum et al, 1999). The reliability scores between the 5 and 6 factor structure were similar.

Because the sample size (n=263) is over 200, the scree plot had to give the final argument what to do. The scree plot (see appendix 3) gives a clear indication that six factors is an appropriate choice: after six factors the plot becomes stable. So the choice was made to work with a 6 factor structure for the importance variables. One variable: “staff avoids confronting dying and deceased persons” was left out of the analysis. The factor loading was too low (.377) to meet the criteria of 0.4. A factor analysis was run without this variable and confirmed that this did not affect the factor structure.

The six factor structure, reliability of the factors and variance explained by this structure are displayed in table 7.

Table 7: Importance factors in nursing homes						
N=263						
Factors and variables (communalities)	**Factor Loadings**					
	1	2	3	4	5	6
Factor 1: Respect and empathy (α = .768)						
Respectful staff (.596)	.695					
Sincere interest in solving my problem (.607)	.649					
Comforting when sad or lonely (.443)	.597					
Keeping the quality of my life as high as possible (.423)	.534					
Every staff member deal with my questions (.570)	.532					
Reckon with personal habits (lifestyle) (.370)	.497					
Time to talk about what bothers me (.511)	.497					
Factor 2: System orientation (α =.758)						
That I can decide when I eat (.595)		.740				
That I can decide which clothes I want to wear (.606)		.740				
That I can decide when I want to go out (.617)		.709				
That I can decide when I go to bed and get up (.561)		.684				
Factor 3: Responsiveness and attention (α =.623)						
Never too busy to respond to my requests (.595)			.675			
Immediate response when I am calling (.576)			.672			
Not have to ask things twice before something is done for me (.477)			.541			
Contact with the physician (.512)			.522			
Factor 4: Professionalism and safety (α =.622)						
A neat staff appearance (.577)				.702		
A professional attitude of the staff (.561)				.654		
No theft in the nursing home (.361)				.585		
Polite staff (.577)				.543		
Factor 5: Inclusion (α =.647)						
Participation in activities during the whole day (.588)					.719	
Connecting with other residents (.589)					.718	
Information about which activities are organised during the day (.420)					.555	
Involvement in making decisions about me (.428)					.447	
Factor 6: Tangibles (α =.500)						
Choice of food and drinks (.531)						.594
Privacy (.447)						.559
When the staff promises to come within a certain time frame they do so (.499)						.504
Eigenvalues	6.053	2.272	1.581	1.325	1.295	1.109
% of variance explained	12.0	9.9	8.2	8.1	8.1	6.2
Cumulative % variance explained	12.0	21.9	30.1	38.2	46.2	52.4

The six factors are holding in the sense that the eigenvalues are all > 1 and range from 6.053 to 1.109.

These factors measure six themes in the importance of nursing home services and were named: respect and empathy, system orientation, responsiveness and attention, professionalism and safety, inclusion and tangibles. These factors do cover partly the dimensions as were defined after the qualitative study (see section 4.2.1.) but in case of system orientation the factor matches the four variables that were added.

The factors explain 52.4% of the variance with individual values between 12.0 to 6.2. The loading of the individual variables on the factors range from 0.740 to 0.447. The internal consistency of the factors range from 0.768, which is considered as acceptable to 0.500 which is questionable.

The communalities of the variables, which are the portions of the variance of that variable that is accounted for by the common factors (MacCallum et al., 1999, p.85), range from 0.617 to 0.361.

A factor is defined by the variables that load on it so the label must characterize this factor as closely as possible to the content of those variables especially to the variables with the highest factor loadings.

Factor 1 was labelled “respect and empathy” and consist out of 7 variables. The factor covers service aspects such as respect, problem solving, comforting , handling questions, quality of life issues, lifestyle and bothering. This gives a slightly other interpretation of empathy then in the original SERVQUAL dimension of empathy (see section 4.2.1).

The following table displays the frequencies of the factor variables “respect and empathy”:

Table 8: Frequency distributions of importance variables in factor respect and empathy

	very important	important	no opinion	slightly unimportant	un-important	Mean	SD
	Respectful staff						
n=260	n=152 (58.5%)	n=107(41.2%)	n=1(.4%)	n=- (-%)	n=- (-%)	1.42	.502
	Sincere interest in solving my problem						
n=261	n=168 (64.4%)	n=90 (34.5%)	n= 1(.4%)	n= 2 (.8%)	n=- (-%)	1.38	.538
	Comforting when sad or lonely						
n=261	n=158 (60.5%)	n=90 (34.5%)	n=6 (2.3%)	n=4 (1.5%)	n=3 1.1%)	1.48	.726
	Keeping the quality of my life as high as possible						
n=262	n=166 (63.4%)	n=91 (34.7%)	n=3 (1.1%)	n=1 (.4%)	n=1 (.4%)	1.40	.576
	Every staff member can deal with my questions						
n=263	n=75 (28.5%)	n=160 (60.8%)	n=16 (6.1%)	n=11 (4.2%)	n=1 (.4%)	1.87	.730
	Reckon with personal habits (lifestyle)						
n=262	n=98 (37.4%)	n=146 (55.7%)	n=15 (5.7%)	n=3 (1.1%)	n=- (-%)	1.71	.626
	Time to talk about what bothers me						
n=263	n=121 (46%)	n=131 (49.8%)	n=9 (3.4%)	n=2 (.8%)	n=- (-%)	1.59	.598
N=263							

Factor 2 was labelled “system orientation”. This was a sixth dimension that was added to the original SERVQUAL dimension. How much freedom of choice do the residents in the nursing home have or how much do they have to conform to the organization of the processes in the nursing home? The four variables choice in eating times, bedtimes, what clothes to wear and to go out when a resident wants to, are all in these factors. Only one variable is missing “involvement in decisions about me”, so the decision to add this dimension seems to be a good choice.

The following table displays the frequencies of these factor variables:

Table 9: Frequency distributions of importance variables in factor system orientation							
	very important	**important**	**no opinion**	**slightly unimportant**	**un-important**	**Mean**	**SD**
	That I can decide when I eat						
n=262	n=19 (7.3%)	n=99 (37.8%)	n=54 (20.6%)	n=77 (29.2%)	n=13 (5%)	2.87	1.071
	That I can decide what I want clothes to wear						
n=262	n=41 (15.6%)	n=143 (54.6%)	n=28 (10.7%)	n=45 (17.2%)	n=5 (1.9%)	2.35	1.001
	That I can decide when I want to go out						
n=259	n=37 (14.3%)	n=122 (47.1%)	n=48 (18.5%)	n=46 (17.8%)	n=6 (2.3%)	2.47	1.016
	That I can decide when I go to bed and get up						
n=262	n=56 (21.4%)	n=135 (51.5%)	n=35 (13.4%)	n=31 (11.8%)	n=5 (1.9%)	2.21	.975
N=263							

Factor 3 was labelled “responsiveness and attention” and deals with the way the staff responds to residents requests: that the staff is never too busy to respond to residents requests, an immediate response when a resident is calling and that they do not have to ask twice before things are done. The contact of the physician may look out of context in this label, but this can be explained by the outcomes of the qualitative study: access to the physician when needed can be seen as an aspect of responsiveness. The following table displays the frequencies of these factor variables:

Table 10: Frequency distributions of importance variables in factor responsiveness and attention							
	Very important	**important**	**no opinion**	**slight unimportant**	**un-important**	**Mean**	**SD**
	Never too busy to respond to my requests						
n=261	n=70 (26.8%)	n=162 (62.1%)	n=20(7.7%)	n=9 (3.4%)	n= - (- %)	1.88	.685
	Immediate response when I am calling						
n=260	n=80 (30.8 %)	n=159 (61.2%)	n=17 (6.5%)	n=4 (1.5%)	n=- (-%)	1.79	.626
	Not have to ask things twice to get my problem solved						
n=262	n=128 (48.9%)	n=133 (50.8%)	n= - (-%)	n=1 (.4%)	n=- (-%)	1.52	.523
	Contact with the physician						
n=261	n=125 (47.9%)	n=118 (45.2%)	n=8 (3.1%)	n=9 (3.4%)	n=1 (.4%)	1.63	.741
N=263							

Factor 4 is labelled “professionalism and safety”. It covers aspects of nursing home services that can be linked to professionalism of staff and a feeling of safety. Most contributing variables in this factor are a neat appearance of staff and a professional attitude of the staff. Contributing variables are also no theft in the nursing home and that the staff is polite. The following table displays the frequencies of these factor variables:

Table 11: Frequency distributions of importance variables in factors professionalism and safety

	very important	important	no opinion	slightly unimportant	un-important	Mean	SD
	A neat appearance of staff						
n=252	n= 45 (17.9%)	n=164 (65.1%)	n=25 (9.9%)	n=16 (8.3%)	n= 2 (.8%)	2.07	.775
	A professional attitude of the staff						
n=261	n= 98 (37.5%)	n=134 (51.3%)	n=15 (5.7%)	n=14 (5.4%)	n=- (-%)	1.79	.778
	No theft in the nursing home						
n=262	n=188 (71.8%)	n=58 (22.1%)	n=9 (3.4%)	n=6 (2.3%)	n=1 (.4%)	1.37	.699
	Polite staff						
n=263	n=107 (40.7%)	n=148 (56.3%)	n=7 (2.7%)	n=1 (.4%)	n=- (-%)	1.63	.558
N=263							

Factor 5 deals with the residents social position within the community of the nursing home. It is labelled “inclusion” and deals with participation in activities that are carried out in the nursing home during the day and the connection with other residents as most contributing variables. Also information about activities and the involvement of the resident in decision making about him or her are elements of inclusion.

The following table displays the frequencies of these factor variables:

Table 12: Frequency distributions of importance variables in factor inclusion							
	very important	**important**	**no opinion**	**slightly unimportant**	**un-important**	**Mean**	**SD**
	Participation in activities during the whole day						
n=260	n=67 (25.8%)	n=126 (48.5%)	n=21 (8.1%)	n=43 (16.5%)	n=3 (1.2%)	2.19	1.036
	Connecting with other residents						
n=262	n=38 (14.5%)	n=148 (56.5%)	n=31 (11.8%)	n=42 (16%)	n=3 (1.1%)	2.33	.950
	Information about which activities are organised during the day						
n=261	n=30 (11.5 %)	n=133 (51%)	n= 36 (13.8%)	n=59(22.6%)	n= - (-%)	2.51	1.002
	Involvement in making decisions about me						
n=261	n=122 (16.7%)	n=99 (37.9%)	n=21(8%)	n=18 (6.9%)	n=1(.4%)	1.76	.877
N=263							

The last and sixth factor is labelled “tangibles”. This factor concerns the tangibles of service delivery like food and drink, privacy and that residents can rely on it that when they demand something the staff will come within a foreseeable timeframe. The last variable does not really fit in this factor but is included in the rest of the analysis. The following table displays the frequencies of these factor variables:

Table 13: Frequency distributions of importance variables in factor tangibles							
	very important	**important**	**no opinion**	**slightly unimportant**	**un-important**	**Mean**	**SD**
	Choice of food and drinks						
n=261	n= 55 (21.1%)	n= 139 (53.3%)	n=28 (10.7%)	n=38 (14.6%)	n= 1 (.4%)	2.20	.948
	Privacy						
n=260	n= 80 (30.8 %)	n=157 (60.4%)	n=8 (3.1 %)	n=15 (3.8 %)	n= - (- %)	1.84	.738
	When the staff promises to come within a certain time frame they do so						
n=260	n=130 (50 %)	n=123 (47.3%)	n=4 (1.5%)	n= 3 (1.2%)	n= - (-%)	1.54	.591
N=263							

Based on these factors compound variables were constructed from the importance variables within the factors and the mean scores from these were calculated (table 14). The mean score is not more than an indication instead

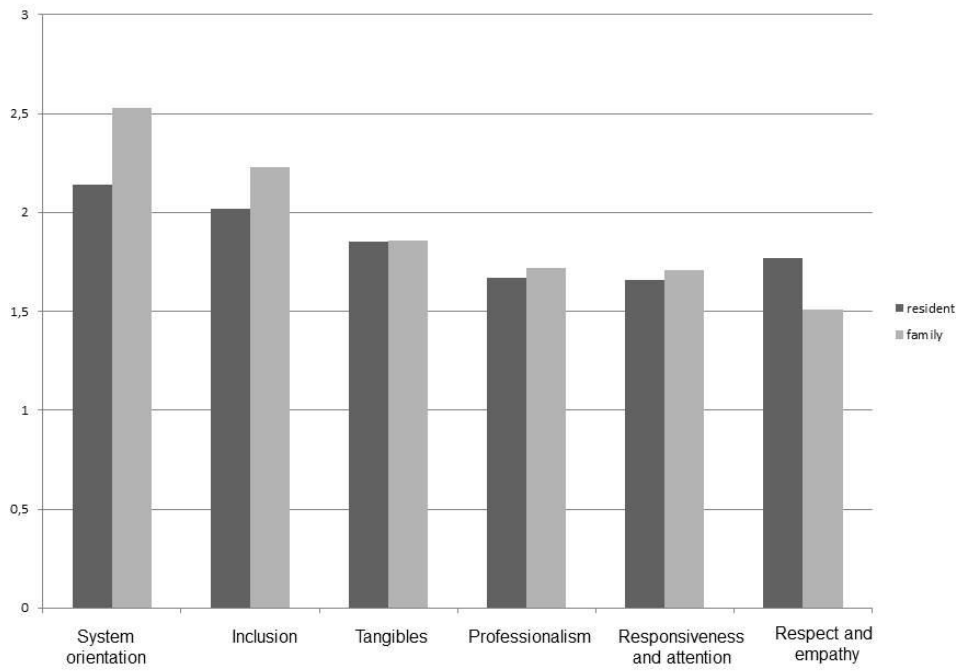
of a precise value because the scores were based on a ordinal Likert scale where the intervals between the values are not considered to be equal.

Table 14: Summary statistics for compound importance variables (in mean order)			
Factor	**Mean score residents (sd)**	**Means score family (sd)**	**Means score total (sd)**
Respect and empathy	1.77 (.53)	1.51 (.36)	1.55 (.40)
Responsiveness and attention	1.66 (.54)	1.71 (.43)	1.70 (.45)
Professionalism and safety	1.67 (.55)	1.72 (.47)	1.71 (.48)
Tangibles	1.85 (.58)	1.86 (.54)	1.86 (.55)
Inclusion	2.02 (.64)	2.23 (.68)	2.20 (.68)
System orientation	2.14 (.59)	2.53 (.79)	2.48 (.77)
N=263	Units: 1=very important 5=unimportant		

From the mean scores all themes are seen as important but there is a priority in order. The theme “respect and empathy” is seen as most important (score between 1 (very important) and 2 (important) with the lowest standard deviation , followed by “responsiveness and attention” and “professionalism and safety”. “Tangibles” are also seen as an important theme. “Inclusion” is a theme that scores lower on importance while “system orientation” is seen as the least important but shows the highest standard deviation.

The factors were tested with Levene’s test for equality of variances between the residents group and the family group. From the test results there is a significant difference in variance between these groups for the factors “respect and empathy” and “system orientation”. This can also already be seen in the histogram in figure 10 in which the scores from the residents and family on the compound variables are displayed.

Figure 10: Differences between resident and family scores on compound importance variables (in mean score order)



From this figure it is obvious that there are significant differences in mean scores between residents and family respondents on the compound variables "respect and empathy" and "system orientation". Family of residents with dementia find empathy less important than residents with physical limitations. This can be explained by the opinion of some family members that their loved ones have no sense of their environment because of their severe dementia, so respect and empathy find no ground because there is no conscious interaction between their loved ones and the staff: "*Respect for the staff that has to deal daily with people with dementia. Often they are the ones who have to decide for the residents. This requires knowledge of demands and needs of residents. I experience that this is mostly the case. But I do understand that this is not always possible*".

The degree of system orientation is seen as more important for residents than family members of residents with dementia. A possible explanation can be found that residents with physical limitations want to make their own choice while some family members state that their loved one needs structure during the day because they are no longer able to make choices. As family respondents remarked in the questionnaire: *"I did not complete the choice questions because my wife has no capacity anymore to choose",* "*these questions are not relevant for residents with dementia"* and *"my loved one can decide when she wants to eat. The answer is no, she cannot, there are fixed times so I should fill in: very bad. But we are happy that she eats at fixed times*"*.*

Prioritisation of SERVQUAL dimensions

In the construction of the original SERVQUAL instrument, participants were invited to weigh each overall dimension. In this version, the potentially complex allocation of 100 points is replaced by a ranking question to prioritise the original SERVQUAL dimensions (the building, room and amenities (tangibles), keeping promises (reliability), fast response when needed (responsiveness), professionalism of staff (assurance) and personal attention (empathy). In the questionnaire respondents were asked to prioritize these dimensions by a ranking question: "give an exclusive score from 1-5 to each dimension". Unfortunately, this question was not always correctly answered because respondents did not give an exclusive score but

gave several dimensions the same priority ranking. So this question shows 53 missing values out of 263 respondents.

Table 15 shows the prioritisation of the original SERVQUAL dimensions:

Table 15: Prioritisation of original SERVQUAL dimensions						
most important	**very important**	**important**	**slightly unimportant**	**unimportant**	**Mean**	**SD**
Personal attention (empathy)						
n=106 (50,5%)	n=49 (23.3%)	n=22 (10,5%)	n=22 (10.5%)	n=11 (5.2%)	4.03	1.227
Professionalism of staff (assurance)						
n= 72 (34.3%)	n=77 (36.7%)	n=29 (13.8%)	n=23 (11%)	n=9 (4.3%)	3.86	1.136
Keeping promises (reliability)						
n= 11 (5.2%)	n=43 (20.5%)	n=77 (36.7%)	n=63 (30%)	n=16 (7.6%)	2.86	1.002
The building amenities and rooms (tangibles)						
n= 15 (7,1%)	n=23 (11%)	n=43 (20.5%)	n=24 (11.4%)	n=105 (50%)	2.14	1.332
Fast response when needed (responsiveness)						
n= 6 (2.9%)	n=18 (8.6%)	n=39 (18.6%)	n=78 (37.1%)	n=69 (32.9%)	2.11	1.052
N=210						

This table shows that personal attention is seen by 50.5% of the respondents as most important. Another 23.3% finds personal attention very important. This makes personal attention as the most important dimension according to 73.8% of the respondents.

Professionalism of staff is seen as very to most important by 71% of the respondents.

Fast response when needed is seen by 70% of the respondents as unimportant to slightly important, while responsiveness is a major issue in quality discussions in nursing homes.

It is also remarkable that the building, the amenities and the room are seen as unimportant to slightly unimportant while it is seen as key in the choice for a nursing home.

According to Levene's test of equality of variances for the SERVQUAL dimensions "fast response when needed (responsiveness)", "professionalism of staff (assurance)" and "personal attention (empathy)" there is a significant ($p < 0.05$) difference in variance between the scores of the residents and the family members (table 1 in appendix 5).

A t-test shows that a significant difference appears in the mean score between the two groups for the variable "professionalism of staff (assurance)".

A description of the scores between the two groups (tables 2 and 3 in appendix 5) reports that residents have higher mean scores on tangibles, reliability and responsiveness than family members while family members have higher mean scores on professionalism and personal attention. Residents with physical limitations find the building, amenities and the room as well as keeping promises and fast response when needed more important than family members. An explanation can be that these aspects differ between residents and family members because the mental capabilities with residents of physical limitations are higher than residents with dementia, personal attention is more important for family members of residents with dementia. A closer look at the score on personal attention indicates that the difference between those scores is not very big: residents have a mean score of 3.86, while family members have a mean score of 4.08. Personal attention is seen as very important by both groups.

Experience factors

The 27 variables have measured the experience of residents and family in the day to day life in the nursing home.

A Kaiser-Meyer-Olkin Measure (KMO) was run to test the sampling adequacy. The KMO was .937 which is much higher than the minimum sampling adequacy of 0.5 (Field, 2009, p.660). A Bartlett test was run to check the spherity. The significance was < .001 with a df = 351. These outcomes allow a factor analysis of the 27 experience variables.

A first factor analysis (Principal Component Analysis) was run and the number of factors was set to six to check the 6 dimensions that were constructed after the qualitative study. The six factor structure was not satisfactory because the sixth factor had an eigenvalue < 1 and was not usable.

A five factor analysis was extracted and this seems to be usable. All factors had an eigenvalue > 1.

A four factor analysis was extracted and this was not usable either. The communalities were lower than in the 5 factor structure (0.58 vs. 0.62) and one variable had a factor loading < 0.4.

Also here, as was the case in the importance variables, the average communality score was < 0.7. This means that also for the experience variables there is an indication that the factor structure depends more on the sample size then when the communalities were higher (MacCallum et al, 1999).

The following table shows the factors for the experience variables (table 16):

Table 16: Experience factors in nursing homes						
N=262						
Factors and variables	**(communalities)**					
		1	2	3	4	5
Factor 1 : Responsiveness and hospitality	**(α = .898)**					
When the staff promises to come within a certain time frame they do so	(.713)	.756				
Immediate response when I am calling	(.682)	.730				
Not have to ask things twice before something is done for me	(.686)	.703				
Never too busy to respond to my requests	(.595)	.589				
Choice of food and drinks	(.536)	.546				
Sincere interest in solving my problems	(.665)	.546				
Professional attitude of the staff	(.690)	.518				
Information about which activities are organised during the day	(.616)	.514				
Keeping the quality of my life as high as possible	(.656)	.420				
Factor 2: Courtesy and personal approach	**(α =.863)**					
Polite staff	(.774)		.786			
Respectful staff	(.758)		.784			
Comforting when sad or lonely	(.647)		.585			
A neat staff appearance	(.444)		.549			
Reckon with personal habits (lifestyle)	(.634)		.477			
Time to talk about what bothers me	(.530)		.436			
Involvement in making decisions about me	(.416)		.415			
Factor 3: Inclusion and care access	**(α =.722)**					
Participation in activities during the whole day	(.668)			.738		
Connecting with other residents	(.558)			.682		
Contact with the physician	(.428)			.560		
Every staff member can deal with my questions	(.649)			.523		
Factor 4: System orientation	**(α =.814)**					
That I can decide when I eat	(.690)				.748	
That I can decide when I want to go out	(.697)				.734	
That I can decide which clothes I want to wear	(.721)				.699	
That I can decide when I go to bed and get up	(.540)				.519	
Privacy	(.542)				.509	
Factor 5: Safety	**(α =.287)**	*Removed from the factor structure*				
Avoids with dying or deceased persons	(.634)					.697
No theft in the nursing home	(.644)					.691
Eigenvalues		11.642	1.620	1.236	1.178	1.036
% of variance explained		16.2	15.6	12.8	11.4	5.9
Cumulative % variance explained		16.2	31.8	44.6	56.0	61.9

This table indicates that the experience factors are stronger than the importance factors. The factors explain more variance and have a higher reliability score. The reliability scores for these factors are good except for the fifth factor. The first four factors have a reliability score > 0.7 which is

acceptable. However, the reliability score on the fifth dimension lies far beneath the acceptable level with a score of 0.287. Given this poor reliability score, the fact that the factor consists out of only 2 variables and the low contribution to the variance explained, this factor was removed from the factor structure.

The remaining four factors have eigenvalues that are all > 1 and range from 11.642 to 1.178. The remaining four factors explain a total of 56% of the variance.

The communalities of the variables, which are the portions of the variance of that variable that is accounted for by the common factors (MacCallum et al, 1999, p.85), range from 0.774 to 0.428 with an average of 0.62).

The loading of the individual variables on the factors range from 0.786 to 0.415. The last value is acceptable as it is > 0.4.

These factors measure four themes in the nursing home service experience and were named: responsiveness and hospitality, courtesy and personal approach, inclusion and care access and system orientation.

These factors differ partly from the dimensions as were defined after the qualitative study (see section 4.1) but also differ from the importance themes as described in the previous section.

This means that the experience themes differ from the importance themes which implicates that what residents and family find important in nursing home services is different from how they experience it.

The first factor was named “responsiveness and hospitality”. Variables that are dealing with responsiveness have the highest contribution to this factor: “when the staff promises to come within a certain time frame they do so”, “immediate response when I am calling”, “not having to ask twice before something is done for me” and “never too busy to respond to my request”. The other variables can be put under the label “hospitality” and contain aspects in the service delivery concerning food and drink, interest in clients problems, professionalism of staff, activities and focus on the quality of life.

Table 17 shows the frequencies of the variables in the factor responsiveness and hospitality:

Table 17: Frequency distributions of experience variables in factor responsiveness and hospitality

	very good	good	average	poor	very poor	Mean	SD
	When the staff promises to come within a certain time frame they do so						
n=254	n=19 (7.5%)	n=130 (51.2%)	n=89 (35%)	n=13 (5.1%)	n=3 (1.2%)	2.41	.753
	Immediate response when I am calling						
n=249	n=15 (6%)	n=122 (49%)	n=96 (38.6%)	n=14 (5.6%)	n=2 (.8%)	2.46	.729
	Not have to ask things twice before something is done for me						
n=257	n=22 (8.6%)	n=125 (48.6%)	n=89 (34.6%)	n=18 (7%)	n=3 (1.2%)	2.44	.794
	Never too busy to respond to my requests						
n=252	n=16 (6.3%)	n=133 (52.8%)	n=88 (34.9%)	n=14 (5.6%)	n=1 (.4%)	2.41	.711
	Choice of food and drinks						
n=258	n=19 (7.4%)	n=154 (59.7%)	n=61 (23.6%)	n=20 (7.8%)	n=4 (1.6%)	2.36	.793
	Sincere interest in solving my problem						
n=256	n=47 (18.4%)	n=142 (55.5%)	n=58 (22.7%)	n=8 (3.1%)	n=1 (.4%)	2.12	.748
	A professional attitude of the staff						
n=258	n=24 (9.3%)	n=132 (51.2%)	n=93 (36%)	n=8 (3.1%)	n=1 (.4%)	2.34	.706
	Information about which activities are organised during the day						
n=249	n=11 (4.4%)	n=116 (46.6%)	n=89 (35.7%)	n=26 (10.4%)	n=7 (2.8%)	2.61	.841
	Keeping the quality of life as high as possible						
n=257	n=44 (17.1%)	n=150 (58.4%)	n=55 (21.4%)	n=6 (2.3%)	n=2 (.8%)	2.11	.733
N=263							

The second factor was named “courtesy and personal approach”. The most contributing variables deal with “courtesy” in the interaction between resident and staff such as politeness and showing respect as well as comforting attitude, a neat appearance and reckon with personal habits**.** The personal approach in the service delivery is described by time to talk when something bothers the resident and involvement of the resident in decision making. Table 18 shows the frequencies of the factor variables:

Table 18: Frequency distributions of experience variables in factor courtesy and personal approach

	very good	good	average	poor	very poor	Mean	SD
	Polite staff						
n=261	n=45 (17.2%)	n=190 (72.8%)	n=25 (9.6%)	n=1 (.4%)	n=- (-%)	1.93	.529
	Respectful staff						
n=258	n=49 (19%)	n=169 (65.5%)	n=38 (14%)	n=3 (1.2%)	n=1 (.4%)	1.98	.642
	Comforting when sad or lonely						
n=253	n=40 (15.8%)	n=150 (59.3%)	n=54 (21.3%)	n=8 (3.2%)	n=1 (.4%)	2.12	.720
	A neat staff appearance						
n=258	n=19 (7.4%)	n=179 (69.4%)	n=57 (22.1%)	n=3 (1.2%)	n=-(-%)	2.17	.580
	Reckon with personal habits (lifestyle)						
n=258	n=33 (12.8%)	n=145 (56.2%)	n=67 (26%)	n=12 (4.7%)	n=1 (.4%)	2.24	.745
	Time to talk about what bothers me						
n=253	n=29 (11.5%)	n=150 (59.3%)	n=64 (25.3%)	n=9 (3.6%)	n=1 (.4%)	2.22	.706
	Involvement in making decisions about me						
n=258	n=30 (11.6%)	n=146 (56%)	n=64 (24.8%)	n=17 (6.6%)	n=1 (.4%)	2.28	.768
N=263							

The third factor was named “inclusion and care access”. The most contributing variables in this factor deal with the inclusion of residents in the social life in the nursing home (activities and connection with other residents). Other variables are connected to access to care (medical care and nursing). In this latter aspect the contact with the physician is important and the ability

of the staff to deal with questions of the resident. Table 19 shows the frequencies of the factor variables:

Table 19: Frequency distributions of experience variables in factor inclusion and care access							
	very good	**good**	**average**	**poor**	**very poor**	**Mean**	**SD**
	Participation in activities during the whole day						
n=253	n=22 (8.7%)	n=102 (40.3%)	n=102(40.3%)	n=22 (8.7%)	n=5 (2%)	2.55	.847
	Connecting with other residents						
n=258	n=14 (5.4%)	n=105 (40.7%)	n=114(44.2%)	n=21 (8.1%)	n=4 (1.8%)	2.6	.779
	Contact with the physician						
n=253	n=30(11.9%)	n=127 (50.2%)	n=67 (26.5%)	n=24 (9.5%)	n=5 (2%)	2.40	.887
	Every staff member can handle my questions						
n=256	n=18 (7%)	n=112 (43.8%)	n=115(44.9%)	n=9 (3.5%)	n=2(.8%)	2.47	.713
N=263							

The fourth and final factor is “system orientation”. This factor contains the same contributing variables as “system orientation” in the importance factor (see previous section). In this experience factor these choice aspects are combined with privacy.

Table 20 shows the contributing variables of this factor.

Table 20: Frequency distributions of experience variables in factor system orientation							
	very good	**good**	**average**	**poor**	**very poor**	**Mean**	**SD**
	That I can decide when I eat						
n=242	n=11 (4.5%)	n=125 (51.7%)	n=82 (33.9%)	n=22 (9.1%)	n=2 (.8%)	2.5	.758
	That I can decide when I want to go out						
n=239	n=22 (9.2%)	n=87 (36.4%)	n=92 (38.5%)	n=33 (13.8%)	n=5 (2.1%)	2.63	.907
	That I can decide which clothes I want to wear						
n=246	n=28 (11.4%)	n=147 (59.8%)	n=56 (22.8%)	n=14 (5.7%)	n=1 (.4%)	2.24	.742
	That I can decide when I go to bed and get up						
n=248	n=26 (10.5%)	n=140 (56.5%)	n=64 (25.8%)	n=16 (6.5%)	n=2 (.8%)	2.31	.776
	Privacy						
n=252	n=28 (11.1%)	n=143 (56.7%)	n=66 (26.2%)	n=14 (5.8%)	n=1 (.4%)	2.27	.747
N=263							

Based on these factors compound variables were constructed and the mean score was calculated (table 21). Also for these experience factors is the mean score is not more than an indication instead of a precise value because the scores are based on a ordinal Likert scale where the intervals between the values are not considered to be equal.

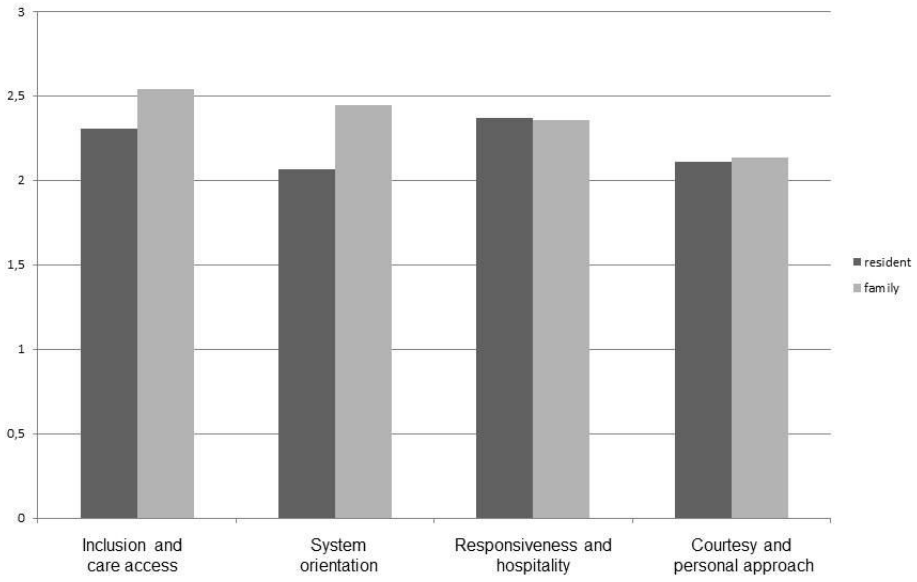
Table 21: Mean score and standard deviation per experience factor in total mean order			
Factor	**Mean score residents (sd)**	**Means score family (sd)**	**Means score total (sd)**
Courtesy and personal approach	2.11 (.53)	2.14 (.49)*	2.13 (.49)*
Responsiveness and hospitality	2.37 (.67)	2.36 (.54)	2.36 (.56)
System orientation	2.07 (.57)	2.45 (.60)	2.39 (.61)
Inclusion and care access	2.31 (.66)	2.54 (.58)	2.51 (.60)
N=262 ***=** 2 cases are missing	Units: 1= very good 5 = very poor		

From the mean score of the factor “inclusion and care access” has the highest total mean score which means that this experience factor has the lowest experience score between “good” and “average”. This confirms many remarks from respondents in which respondents are complaining about the lack of activities which promote inclusion of themselves or their loves ones: “*there are no activities that match with my Parkinson’s disease*”, “*More activities necessary for residents. They now sit, sit, sit and sleep for many hours*”.

The three other factors score slightly lower which means that they tend to score towards “good” in which the factor ”courtesy and personal approach” has the lowest score which means that this factor is experienced as the best of all factors by scoring the closest to “good”, followed by the factors “courtesy and personal approach” and “system orientation”.

The highest score also has the second highest standard deviation. When the scores are displayed in a histogram (figure 11), the difference between the resident and family scores become obvious on these two factors.

Figure 11: Differences between resident and family scores on compound experience variables (in total mean order)



The difference in scores in the factors “responsiveness and hospitality “ and “courtesy and personal approach” is obviously lower than for the other two factors.

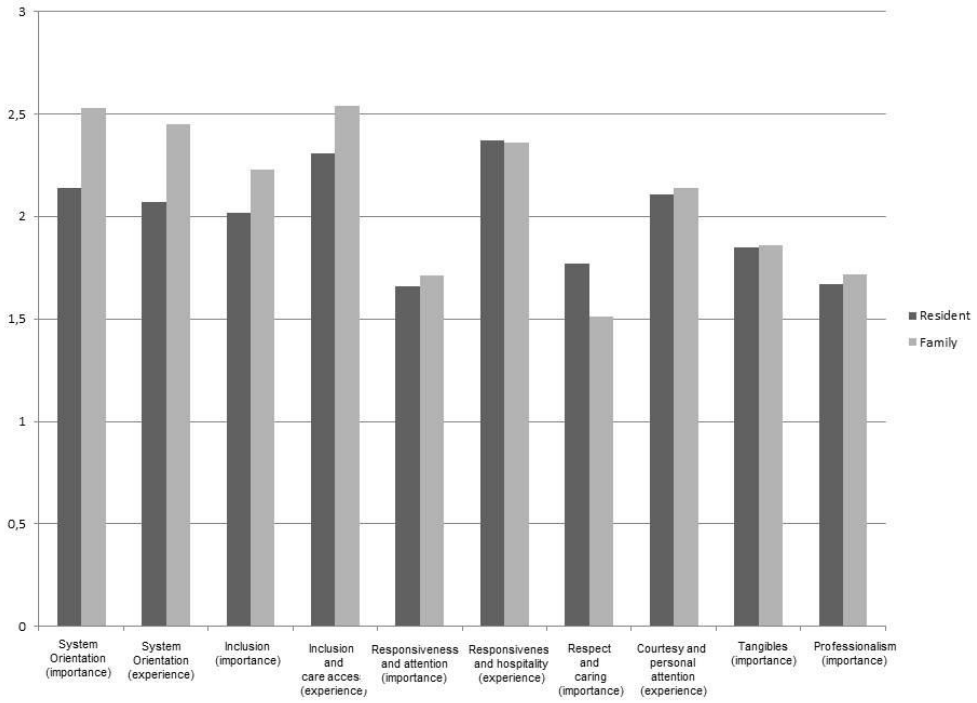
Apparently the experience of the service delivery in nursing homes on “responsiveness and hospitality” and “courtesy and personal approach” is almost the same for residents and family members.

Importance and experience factors compared

The mean scores of the importance and experience factors are compared to explore if factors with similar labels have identical scores. Figure 12 shows the scores on importance and experience factors.

Importance and experience factors which are labelled similarly are displayed next to each other.

Figure 12: Comparison of differences between resident and family scores on compound importance and experience variables



From this figure the overall pattern shows that both in importance and experience variables family members have a higher score which means that they find these aspects less important than residents. However, they experience it poorer than residents except in the importance for “respect and caring” and the experience of “responsiveness and hospitality”. The “system orientation “ compound variables show similarities in the scoring pattern.

Both variables have a higher score in importance and experience by family members. This means that the family respondents find ”system orientation” less important but they experience it also poorer than residents. This is also the case with factors that have “inclusion” characteristics.

These findings lead to the question if there is a relationship between the scores on the importance and experience variables. In other words lead a higher score on the importance variables to a higher score on experience variables? This will be addressed in the next section where the disconfirmation between importance and experience variables is explored as a foundation of perceived service quality.

4.3.3 Objective 2: to explore disconfirmation as a foundation for perceived quality

Gap scores

The second objective was to explore the role of the disconfirmation paradigm as the foundation for perceived service quality. The analysis method was based on the gap score between the importance variable and the experience variable of the same item. The problem that occurs is that the Likert scaling on importance and that of experience are different. The Likert scaling on importance is very important – important - no opinion - slight important - unimportant while the Likert scaling on experience is very good –good – average – poor - very poor.

Both are a five-point scale with the same ordinal structure. But “No opinion” can be interpreted as a midpoint “important/not important” while “average”

forms the midpoint between “good” and “poor”, which means that a gap score can be calculated between importance and experience variables.

According to the SERVQUAL calculation (Zeithaml et al., 1990 p.176) the service quality gap scores are obtained by subtracting the importance scores from the experience scores. When the experience scores exceed the importance score (gap score is positive), the perceived quality is expected to be perceived as good , when the importance scores exceed the experience scores (gap score is negative) the perceived quality is considered not good. The gap score needs to be zero when the service delivery is confirming the expectations.

But in this study the score is the other way around: the more important an aspect is the lower the score. The better the experienced service delivery is the lower the score is. If the SERVQUAL calculation is followed this leads to false results: with a high experience score and a low importance score you get a high gap score. According to the SERVQUAL system this is considered as exceeding the expectations. However in this study this means that the experience was not good (high score) on an important aspect (low score). So to calculate the gap score accordingly a reciprocal calculation has to be done: instead of expectations minus importance, importance minus expectations is calculated.

The best gap score is when the average importance score is low (the lower the more important) and the experience score is also low (the lower the better the experience is). So a low score on both average scores and a gap score around zero is the best you can have: the respondent finds it very

important and the experience is very good. So the best gap scores can be identified by two aspects: a low gap score (either positive or negative) combined with low average scores on importance and experience.

In table 22 the gap scores are displayed between the experience and importance variables:

Table 22: Mean gap scores between experience and importance variables (ranked to gap score)

Variable	Mean gap score*	Sd	Mean imp. score	Mean exp. Score	N=262
That I can decide when I eat	.315	1.238	2.87	2.50	n=241
Avoids dying or deceased persons	.290	1.300	2.48	2.17	n=245
That I can decide which clothes I want to wear	.053	1.083	2.35	2.24	n=245
Information about which activities are organised during the day	-.086	1.278	2.51	2.61	n=248
A neat staff appearance	-.108	.940	2.07	2.17	n=248
Choice of food and drinks	-.160	1.231	2.20	2.36	n=256
That I can decide when I go to bed and get up	-.166	1.036	2.21	2.31	n=247
That I can decide when I want to go out	-.227	1.276	2.47	2.63	n=238
Connecting with other residents	-.271	1.068	2.33	2.60	n=258
Polite staff	-.303	.742	1.63	1.93	n=261
Participation in activities during the whole day	-.390	1.293	2.19	2.55	n=251
Privacy	-.434	1.042	1.84	2.27	n=249
Involvement in making decisions about me	-.516	1.088	1.76	2.28	n=256
Never too busy to respond to my requests	-.528	.986	1.88	2.41	n=250
Reckon with personal habits (lifestyle)	-.529	.935	1.71	2.24	n=257
A professional attitude of the staff	-.547	1.005	1.79	2.34	n=256
Respectful staff	-.559	.814	1.42	1.98	n=256
Every staff member handle my questions	-.609	1.008	1.87	2.47	n=256
Time to talk about what bothers me	-.652	.844	1.59	2.22	n=253
Immediate response when I am calling	-.668	.947	1.79	2.46	n=247
Comforting when sad or lonely	-.691	.888	1.48	2.12	n=252
Keeping the quality of my life as high as possible	-.715	.916	1.40	2.11	n=256
Sincere interest in solving my problem	-.744	.886	1.38	2.12	n=254
Contact with the physician	- 763	1.054	1.63	2.40	n=253
When the staff promises to come within a certain time frame they do so	-.873	.986	1.54	2.41	n=252
Not have to ask things twice before something is done for me	- .914	.974	1.52	2.44	n=256
No theft in the nursing home	-1.054	1.321	1.37	2.43	n=255

*the gap score can differ from the subtraction between the means because of missing values on the importance or experience variable

The majority of the gap scores are negative which means that the experience is below what respondents find important. This table shows that all gap scores are between .315 (that I can decide when I eat) and -1.0544 (no theft

in the nursing home). This means that the difference between what respondents find important and how they experience do show a big difference in scores. The standard deviation scores show also a lot of variance on the gap scores which means there is a lot of difference in gap scores.

The average “importance scores” vary from 1.37 to 2.87 , from in between “very important” and “important” to “no opinion”. The average experience score is 2.43 which means that they experience this as “good” to “average”. Overall the experience scores are all between 2 and 3 except for politeness of and respect from the staff which are lower than 2. Politeness of the staff is the best score because it is seen as important (low score of 1.63) and has an experience score that is below 2 which means that it is seen between “good” and “very good”.

Before interpreting the gap scores it is interesting to look closer at the mean scores of the respondents. It can be the case that these aspects are, according to respondents, not very important (the higher the score the less important the aspect is), while the experience scores are low, which means that there is a good experience on these aspects. Then a relatively low score on experience (the lower the score the better the experience is) will result in a higher positive score. So the lower the experience score, the better the performance is on low important aspects (high score). The mean importance score on “that I can decide when I eat” is 2.87, on “avoids dying or deceased persons” is 2.48 and on “that I can decide which clothes I want to wear” is 2.35. These are relatively high scores in between the labels “important” and

“no opinion” and are the variables that are found as the least important by respondents.

The highest gap score is on the item “that I can decide when I eat” (.315) which happens also to be the least important item according to the respondents because it has the highest importance score. The experience score is the fourth highest of the experience variables (2.50) which means that the performance on this least important variable is also low.

If the other end of the gap scores are viewed on “no theft in the nursing home” (-1.054) it happens to be the most important aspect seen by respondents because the average importance score on this variable is 1.37 which is the lowest of all average importance scores. The standard deviation on this variable is .699 which is not high compared to the other importance variables. But this variable has an average mean score on experience (2.43) which leads to a high gap score although this average score has a high standard deviation of 1.083. This is confirmed by the finding that on this variable the standard deviation of the gap score is the highest of all gap scores.

The best score is when the importance and experience scores are low and are close to zero. This means that the variable is seen as important by residents and that the experience is also good. This is the case with “respectful staff” which has an importance score of 1.42 and an experience score of 1.98, while the gap score of .552 falls in the mid-range of gap scores.

Correlation analysis

To explore if the disconfirmation is the foundation for perceived service quality an analysis should be made between gap scores and perceived service quality. But because the importance and experience scales are not exactly identical (see section 4.2.1.) the question arises if the disconfirmation can be represented by gap scores. In this study another approach has been chosen. By analysing the relationship between importance and experience factors, the nature of the disconfirmation can be identified. The second step is to explore if there is a significant relationship between importance and perceived service quality and experience with perceived service quality.

The first analysis was focusing on the relationship between importance and experience. To analyse the relationship between importance and experience the next step was to execute a correlation analysis between the importance factors and the experience factors based on a Pearson's correlation coefficient. The second step explored if there is a relationship between importance factors and perceived service quality on one side and experience factors with perceived service quality on the other side. If there is no significant relationship between either the importance and experience factors with perceived service quality the disconfirmation between importance and experience factors will also have no significant relationship with perceived service quality.

The result from the first step is that there is no significant correlation between the importance factors and the experience factors ($0.012 < r < 0.155$) ($p > 0.01$). This means that a downward or upward tendency in respondent

scores on importance does not relate to a tendency pattern in respondent scores on experience.

The result from the second step, the analysis of the relationship between importance factors and perceived service quality, is that there is no significant correlation between the importance factors and perceived service quality (table 23):

Table 23: Correlation between importance factors and perceived quality			
	Factors	**Pearson's r**	**Sig. (2-tailed)**
		Perceived quality	
n=251	Respect and empathy	.034	p = .596
n=251	System orientation	.019	p = .765
n=251	Responsiveness and attention	-.043	p = .493
n=251	Professionalism and safety	.111	p = .080
n=251	Inclusion	-.026	p = .682
n=250	Tangibles	.109	p = .087
N=263			

This means that the scores on the constructed factors in what residents and family find important in nursing home services have no relationship with or are not affecting the experience nor the perceived quality of nursing home services. This indicates that the importance factors seem to lose their influence in judging the service delivery.

The experience factors show a different picture. The experience factors have a significant correlation with perceived quality (table 24):

Table 24: Correlation between experience factors and perceived quality			
	Factors	**Pearson's r**	**Sig. (2-tailed)**
		Perceived quality	
n=250	Responsiveness and hospitality	.711	p < 0.01
n=250	Courtesy and personal approach	.643	p < 0.01
n=250	Inclusion and care access	.528	p < 0.01
n=250	System orientation	.465	p < 0.01
N=262			

These findings indicate that the perception of the quality of nursing home services is influenced by experience and not by what respondents find important. Thus experience but not importance is key for perceived service quality.

Predictors of perceived service quality

Now it is clear that there is a significant correlation between the experience factors and perceived service quality, the question arises if the experience factors are a predictor to perceived service quality.

A multiple regression analysis was carried out to test this. Multicollinearity between the predictors was checked and the Variance Inflation Factor (VIF) varies from 1.68 to 3.325 which is under the critical value of 10. So the correlation between the predictors (experience factors) are not disturbing the predictor values to perceived quality.

The multiple regression analysis gives a significant indication ($p < 0.01$) that the model is able to predict perceived service quality by the experience factors (table 25). The F-ratio is 68.47 with a df = 4.

The model explains 53% of the variance ($R^2 = 0,53$). The Durbin-Watson value is 1.72 which is between 1 and 3. This means that errors in the regression are independent and not violating the model.

Now the question arises how each factor contributes to the prediction of perceived service quality.

In the following analysis perceived service quality is regressed to the experience factors (table 25).

Table 25: Multiple regression analysis of experience factors and perceived service quality

Experience Factor			**ß**	**T**	**Sig**
Responsiveness and hospitality			.539	6.720	.000
Courtesy and personal approach			.197	2.513	.013
Inclusion and care access			.025	.402	.688
System Orientation			.006	.100	.921
Model Summary	**R**	**R^2**	**Adjusted R^2**	**Std error of estimate**	
	.728	.530	.522	.502	
Analysis of Variance					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Significance**
Regression	68.909	4	17.227	68.471	.000
Residual	61.139	243	.252		
Total	130.048	247			
Dependent variable: Perceived service quality					

From this table the factor “responsiveness and hospitality” ($t = 6.720$, $p < 0.01$) has the highest significant contribution to the prediction of perceived service quality.

The factor “Courtesy and personal approach” ($t=2.513$, $p < 0.05$)) has less impact but also has a significant contribution as predictor to perceived service quality.

The factors “inclusion and care access” and “system orientation” have a low, non-significant, impact as predictors.

It can now be stated that some experience factors have the power to predict perceived service quality in nursing home services, specifically the factors “responsiveness and hospitality” and “courtesy and personal approach” have a significant impact on the prediction of perceived service quality.

4.3.4 Objective 3: To understand the role of perceived service quality as a predictor for resident satisfaction.

The last objective was to understand the role of perceived service quality as a predictor for resident satisfaction.

In the questionnaire the question was asked “how do you perceive the quality of care and services in this nursing home?” immediately after the importance questions and before the experience questions. Respondents could respond on a five point scale: very good – good –average – poor – very poor. The question: “How does the nursing home meet your needs?” was asked immediately after the experience questions. Respondents could respond on a seven point scale with the value labels: perfect – extremely well – OK – no opinion – not really –badly – not at all. This question was followed by question “How do you feel about this nursing home?”. Respondents could respond on a seven points scale with the value labels delighted – pleased – OK – no opinion –a bit disappointed – unhappy – awful.

The results on these variables are described in the following frequency table (table 26):

Table 26: Frequency distributions of perceived service quality, nursing home meets needs and feelings about the nursing home								**Mean**	**SD**
	How do you perceive the service delivery in this nursing home ?								
	very good		**good**	**average**	**poor**	**very poor**			
n=251	49 (19.5%)		137 (54.6%)	60 (23.9%)	4 (1.6%)	1 (.4%)		2.09	.727
	How does the nursing home meet your needs ?								
	perfect	extremely well	OK	no opinion	not really	badly	not at all		
n=259	11 (4.2%)	52 (20.1%)	154(59.5%)	20(7.7%)	19 (7.3%)	3 (1.1%)	- (-%)	2.97	.921
	How do you feel about this nursing home ?								
	delighted	pleased	OK	no opinion	a bit disapp.	un-happy	awful		
n=256	37 (14.5%)	83 (32.4%)	105 (41%)	12(4.7%)	17 (6.6%)	2 (.8%)	- (-%)	2.59	1.059
N=263									

From this table it can be read that “perceived service quality” is rated as “good” to “very good” by 74.1% of the respondents. The opinion how the nursing home meets their needs is seen by 59.5% as “OK” and “extremely well” by 20.1% of the respondents. Respondents feelings about the nursing home as “OK” by 41% and as “pleased” by 32.4%. 14.5% of the respondents are “delighted” about the nursing home.

Levene’s test of equality of variances shows no significant difference ($p < 0.05$) between residents and family members.

The second step was to calculate the correlation coefficients between the three variables (table 27):

Table 27: correlation matrix (Pearson r)

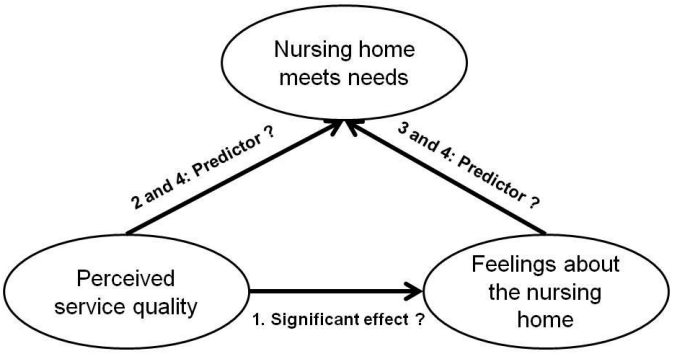
	perceived service quality	nursing home meets needs	feelings about the nursing home
perceived service quality	1.000	r = .622 (p< .001)	r =.688 (p< .001)
nursing home meets needs	r = .622 (p< .001)	1.000	r =.755 (p< .001)
feelings about the nursing home	r =.688 (p< .001)	r =.755 (p< .001)	1.000

As can be derived from this table the correlations between the three variables are strong and significant ($p < 0.01$).

The question arises what the position is of the three variables towards each other. The objective focuses on the predicting relationship between “perceived service quality” and “feelings about the nursing home”. But what is the role of the variable “nursing home meets needs”? Can this be an intervening or mediator variable on the relationship between “perceived service quality” and “feelings about the nursing home”? If “nursing home

meets needs" is an mediating variable, then four relationships should be tested (see figure 13)

Figure 13: Mediator analysis scheme



The first relationship is the relationship between "perceived service quality" and "feelings about the nursing home". A regression analysis must test if "perceived service quality" has a significant effect on "feelings about the nursing home". The results are displayed in the following table (table 28):

Table 28: Regression analysis between perceived service quality and feelings about the nursing home

Variable			**ß**	**T**	**sig**
Perceived service quality			.688	14.75	.000
Model Summary	**R**	**R^2**	**Adjusted R^2**	**Std. error of estimate**	
	.688	.473	.471	.774	
Analysis of Variance					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Significance**
Regression	130.377	1	130.377	217.62	.000
Residual	144.983	242	.599		
Total	275.361	243			
Dependent variable: feelings about the nursing home					

The regression analysis gives a significant indication ($p < 0.01$) that perceived service quality" is a predictor for "feelings about the nursing home".

The second question is that if “nursing home meets needs” explains the relationship between “perceived service quality” and “feelings about the nursing home” there must be a relationship between “nursing home meets needs” as dependent variable and “perceived service quality” as predictor. The results are displayed in the following table (table 29):

Table 29: Regression analysis between perceived service quality and nursing home meets needs

Variable			**ß**	**T**	**sig**
Perceived service quality			.622	12.461	.000
Model Summary	**R**	**R^2**	**Adjusted R^2**	**Std error of estimate**	
	.622	.387	.384	.730	
Analysis of Variance					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Significance**
Regression	82.75	1	82.75	155.269	.000
Residual	131.105	246	.533		
Total	213.855	247			
Dependent variable: Nursing home meets needs					

Also here is a significant indication ($p < 0.001$) that perceived service quality is a predictor for nursing home meets needs.

The third step is to investigate the relationship between “feelings about the nursing home” as predictor to “nursing meets needs” as dependent variable. The results are displayed in the following table:

Table 30: regression analysis between feelings about the nursing home and nursing home meets needs

Variable			**ß**	**T**	**Significance**
Feelings about the nursing home			.755	18.3	.000
Model Summary	**R**	**R^2**	**Adjusted R^2**	**Std error of estimate**	
	.755	.571	.569	.608	
Analysis of Variance					
	Sum of squares	**Df**	**Mean Square**	**F**	**Significance**
Regression	123.77	1	123.770	334.906	.000
Residual	93.131	252	.370		
Total	216.902	253			
Dependent variable: Nursing home meets needs					

From the results of the regression analysis it is confirmed that “feelings about the nursing home” is a predictor to “nursing home meets needs”.

Finally, if “nursing home meets needs” is explaining the relationship between “perceived service quality” and “feelings about the nursing home” then this implies that “feelings about the nursing home” no longer has a significant relationship with “perceived service quality” when “nursing home meets needs” is kept constant. In other words, a multiple regression analysis must be carried out with “perceived service quality” and “nursing home meets needs” as predictors for “feelings about the nursing home” to indicate there is no significance.

A multiple regression analysis was carried out with the dependent variable “feelings about the nursing home” and the predictor variables “perceived service quality” and “nursing home meets needs”.

Multicollinearity between the predictors was checked and the Variance Inflation Factor (VIF) was 1.633 (t = 0.612) which is under the critical value of 10. So the correlation between the predictors (perceived service quality and nursing home meets needs) are not disturbing the predictor values to "feelings about the nursing home".

The following table describes the outcomes of the multiple regression analysis (table 31):

Table 31: Multiple regression analysis between perceived service quality, nursing home needs and feelings about the nursing home

Variables			**ß**	**T**	**Significance**
Perceived service quality			.360	7.315	.000
Nursing home meets needs			.527	10.697	.000
Model Summary	**R**	**R^2**	**Adjusted R^2**	**Std error of estimate**	
	.802	.644	.641	.639	
Analysis of Variance					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Significance**
Regression	177.008	2	88.504	216.718	.000
Residual	98.012	240	.408		
Total	275.021	242			
Dependent variable: feelings about the nursing home					

The model explains 64% of the variance (R^2 = 0,644). The Durbin-Watson value is 1.825 which is between 1 and 3. From this test there is no evidence that the variable "nursing home meets needs" is a mediating variable on the relationship between "perceived service quality" and "feelings about the nursing home", because the relationship between "perceived service quality" and "feelings about the nursing home" are still significant.

However, when the results of the regression analysis between "perceived service quality" and "feelings about the nursing home" (table 28) are involved

in the results of this test then there is a major difference between the ß-coefficients of “perceived service quality” in both tests: ß = 0.688 (table 28) vs. ß = 0.360 (table 31). This means that the predictor effect of “perceived service quality” on “feelings about the nursing home” becomes weaker when “nursing home meets needs” is involved. This means that the variable “nursing home meets needs” has a partial mediation effect on the relationship between “perceived service quality” and “feelings about the nursing home”. This suggests that the variables “perceived service quality” and “nursing home meets needs” have a significant ability to predict “feelings about the nursing home” and that “nursing home meets needs” has a partial mediation effect.

4.4 Summary of results of phase 2

Phase 2 was focusing on the construction of the questionnaire and the analysis of quantitative data collected by this questionnaire.

The outcomes of phase 1 the thematic analysis of the qualitative data has led to a modification of the original SERVQUAL questionnaire that consisted out of five dimensions (tangibles, reliability, assurance, responsiveness empathy) and 22 items. For this study the questionnaire was modified into 6 dimensions and 27 items. The sixth dimension “system orientation” was added. This dimension refers to the influence of the organisation of the operations on the freedom of choice of residents.

The questionnaire was completed by 40 nursing home residents with physical limitations and 223 family members of nursing home residents with dementia.

The quantitative data was analysed using the three objectives of this study as a reference.

The first objective was to establish the dimensionality and develop scale items for service quality in nursing homes. This was done by an explorative factor analysis on the 27 variables of the questionnaire measured as importance variables and measured as experience variables.

The factor analysis has resulted in six importance factors and four experience factors.

The six importance factors were labelled as “respect and empathy”, “system orientation”, “responsiveness and attention”, “professionalism and safety”, “inclusion” and “tangibles”.

The four experience factors were labelled as “responsiveness and hospitality”, “courtesy and personal approach”, “inclusion and care access” and “system orientation”.

The second objective was to explore disconfirmation as the foundation for perceived service quality.

The results from this analysis are that disconfirmation does not play a role in perceived service quality. Also the importance factors show no significant relationship with perceived service quality. This is different for the experience factors: they show a significant relationship with perceived service quality. A regression analysis shows that two experience factors, “responsiveness and hospitality” and “courtesy and personal approach” have the ability to predict perceived service quality.

The third objective was to understand the role of perceived service quality as a predictor for resident satisfaction. Perceived service quality was related to two variables that represent satisfaction: “the nursing home meets needs” and “feelings about the nursing home”. The analysis was focusing on the relationship between these variables. The result of the analysis is that it suggests that the variables “perceived service quality” and “nursing home meets needs” have a significant ability to predict “feelings about the nursing home” and that “nursing home meets needs” has a partial mediation effect.

The outcome of the second phase give input to the development of a service quality construction which is the aim of this study and is described in the next section, conclusions and discussion.

5 DISCUSSION AND CONCLUSIONS

5.1 Discussion

Three objectives were formulated for this study:

- To establish the dimensionality and develop scale items for service quality in nursing homes
- To explore disconfirmation as the foundation for perceived service quality.
- To understand the role of perceived service quality as a predictor for resident satisfaction.

Dimensionality and scale items for service quality in nursing homes

In this study a qualitative phase of research used the SERVQUAL construct as a reference to develop the dimensionality and scale items for service quality in nursing homes. The findings in this study show that the SERVQUAL dimensions were suitable as a starting point but need modification in dimensionality, scale items and in the definition of expectations. The SERVQUAL dimensions are suitable to structure the service quality scale but this distinction was not made by nursing home residents with physical limitations and family members of nursing home residents with dementia during the interviews. The dimensional structure was used to categorise qualitative interview data and to structure the questionnaire. The dimensionality of service quality needed an additional dimension to the original five SERVQUAL dimensions tangibles, responsiveness, assurance, reliability and empathy. The additional dimension was called “system orientation” to address the ability to choose

daily life aspects in a nursing home. Interviewees and respondents experience a system in which service delivery is planned according to the organisation and not according to the clients' choice. This system can be seen as a product of "framing thinking" (Moor, 2012, p.236) by nursing home managers and needs to be reframed. The reframing must reflect the residents perspective instead of the planning and logistics of the processes in the nursing home.

In keeping with the spirit of the original proposal of the SERVQUAL instrument the original 22 SERVQUAL items were modified and 5 items were added to the questionnaire. Some items were removed, other items were modified to make them more relevant to the context of a nursing home.

The modification of scale items is needed because the interviews learned that in the context of a nursing home scale items must be understood differently. An example of this is the tangible "room". The finding that residents and family point out "privacy" as an important aspect of service delivery, and not the room, suggests that the tangible "room" is converted into "privacy" when staying in the nursing home. Privacy can be an important aspect in the case of a shared room. This was not investigated in this study. Another explanation can be that residents do not stay in their room the whole day but are out in the common living room or are involved in an activities programme. In this situation the tangible room is not relevant but the feeling of having privacy in a situation where residents are part of a group.

The value scale that is used in the SERVQUAL construct to measure expectations is not suitable in the nursing home context. The SERVQUAL

questionnaire uses the phrase “excellent companies will” (Zeithaml et al., 1990, p.181) as a scale item to measure expectations. The respondent can score on a five point Likert scale if they agree or disagree with this statement. The wording “excellent companies will” is not connected to the service customer themselves and to the individual service, but to the excellence of the service company. Therefore the question is whether the service customer’s expectations of service delivery are measured, or that it is measuring the customer’s image of how an excellent service company should behave. This makes the measurement of expectations vague. Therefore, the way SERVQUAL measures expectations is not applicable in the nursing home context because of two reasons. The first reason is that moving to a nursing home can be caused by a sudden event like a stroke and gives residents no time to develop expectations because they do not know what to expect, making the concept of “expectations” difficult to understand in the context of a nursing home. Expectations were “fuzzy” like “taking care of him like at home”. Grönroos (2007, p.100) describes fuzzy expectations as “when customers expect a service provider to solve a problem but do not have a clear understanding what should be done”. Besides this there are also “implicit” expectations (p.101), which are very obvious like housing, a bed and food that have to be provided by a nursing home. This can also be the reason that tangibles like the room and a choice of food and drink are not explicitly mentioned in the interviews. The second reason is that being in the situation of having to choose a nursing home is seen as a negative experience by all interviewees and family members. The

“purchase” of nursing home services is not comparable to that in other service industries. For residents with a progressive disease like Parkinson’s or dementia the nursing home is a future perspective that comes nearer and nearer but is something that people do not want to think about. The findings in this study illustrate that “expectations” are not the right wording for people who fear moving to a nursing home. A more understandable word is “important” because residents and family members know what they find important in their daily lives and that of their loved ones.

In the book “Delivering Service Quality” in which Zeithaml et al. describe the SERVQUAL model (1990), they state that it is reasonable to speculate that the five SERVQUAL dimensions (tangibles, reliability, responsiveness, assurance and empathy) are equally important to the customer (p.26). To test this, customers were asked to rate each dimension on importance. The results were that “responsiveness” was seen as most important to customers regardless of the service sector that was being studied (p.27). The authors are referring to services sector that they studied: credit card, repair and maintenance, long-distance telephone and retail banking services. The respondents in this study were also asked to rate the SERVQUAL dimensions to their importance. The results differ from the SERVQUAL study. The respondents in this study found “empathy” the most important dimension next to “assurance”, while in the SERVQUAL study “reliability” and “responsiveness” was seen as most important. Residents and family members of residents with dementia in a nursing home found aspects that

focus on contact and communication between staff and resident and the behavioural aspects of the staff most important.

The purification of the constructed service quality scale for nursing homes by a factor analysis has resulted in six factors representing “importance” and four factors representing “experience”.

The importance factors differ strongly from the original SERVQUAL factors which means in the contextualisation in this study that the original five dimensions are not identified. The added dimension of “system orientation” abides well in the factor analysis which means that factors regarding choice in the service delivery play a role in which residents and family members find important. The way the staff interacts with the resident and choice for residents are the strongest factors and seen as most important. This leads to the conclusion from the findings in this study that interaction between resident and staff plays a more important role in the service delivery in a nursing home than tangible aspects like privacy, a choice of food and drink and the neat appearance of staff.

The four experience factors have a stronger reliability score and explain more variance than the importance factors. This indicates that experiences in service delivery can be clearly differentiated and are more comprehensive than importance. Variables that represent interactional aspects of the service delivery are present again in the strongest factors although food and drink is included in the strongest experience factor “responsiveness and hospitality”. The second strongest factor is named “courtesy and personal approach”. The

factor “system orientation” is the weakest factor of these four. This finding suggests that choice as an aspect of service delivery becomes less prominent in the experience of the service delivery although it was seen as important. This suggests that residents adjust their judgement about choice in the service delivery experience to the possibilities of the services in the nursing home, while interactional aspects become more clear as a reference framework for service delivery.

The findings in this study that interactional aspects play a prominent role in both importance and experience confirm Svensson’s statement that the outcome of service quality depends on the interaction between service providers and service receivers (Svensson, 2006).

Disconfirmation and perceived service quality

The second objective was to explore if disconfirmation is a foundation for perceived service quality. The results in this study show that disconfirmation was not a foundation for perceived service quality in nursing homes. This finding indicates that what residents and family members find important is not the reference point for the judgement about the experienced service delivery in nursing homes. This supports the view of Cronin and Taylor (Cronin and Taylor, 1992) that service quality must be measured through an attitude paradigm instead of a disconfirmation paradigm, something that was already confirmed by other scholars who investigated service quality in health care (Boulding et al., 1993; McAlexander et al., 1994; Lee et al., 2000). It can be seen from this perspective what residents and family members find important

as input for a marketing strategy, while the findings for the service experience is more the input for the service quality strategy of managers.

Some background information of the respondents, as was collected in this study, also gives input to the marketing strategy of a nursing home. The decision making process and the criteria for choosing the nursing home are aspects that were added to the questionnaire to collect background information of the residents situation prior to the move to a nursing home. The findings in this study show that the main decision maker to move someone to the nursing home is the physician combined with family. This gives the physician a very influential role and it raises the question of whether the physician is someone who residents and family trust in giving the best solution to their problem or that medical aspects are driving the decision of moving to a nursing home. The findings on the criteria for choosing a nursing home suggest that reputation and location were also key for the choice for a nursing home next to the room. This is also the finding of a study into what decision makers find important in choosing a nursing home (Hill, 2001). These findings implicate that marketing of the nursing home's reputation and location is an important task for managers to influence the choice of residents and family for their nursing home. The question arises if the physician is also the one who advises the resident or family to go to a particular nursing home instead of the resident or family choosing a nursing home on their own. If so, the marketing strategy of the nursing home must involve the physicians such as the medical specialists in hospitals or the local general practitioners.

Perceived service quality and resident satisfaction

The third objective of this study was to understand the role of perceived service quality as a predictor for resident satisfaction. From the findings of this study it is confirmed that perceived service quality has a predictive power to satisfaction as rated by residents and family members of residents with dementia. The way in which the nursing home meets the needs as experienced by residents and family members had a partial mediating effect on the relationship between perceived service quality and resident satisfaction, and is a predictor to resident satisfaction. These findings indicate that in the context of a nursing home, *outcome* such as meeting the individual needs of the resident play a role in resident satisfaction next to the perception of *output*, the service delivery. Outcome in health care can be defined as the result of medical treatment and care and is connected to value as is stated in the book “Redefining health care” of Porter and Teisberg (2006). Although their book focused on medical and hospital care it can be translated to nursing homes by defining value as an effect on the quality of life of residents while the output, the actual service delivery, is a means to create that value. This, from the service quality point of view, is what Grönroos describes as “value creation” (Grönroos, 2011). According to Grönroos’ view the resources (services and tangibles) of a service provider can be seen as the resources that makes value creation possible. Value creation is described as “the process of creating value-in-use out of such resources” (p.7). The customer is the one who creates value and is facilitated by the provider by his resources. In a nursing home context the provider and

the customer have continuous interaction which creates lots of opportunities for the provider to influence the value creation of the customer (p.10). Applied to this study, the resource can be the room that aids privacy which is experienced by residents. The room is integrated in the value creation process of “privacy” by the resident.

But the service encounter in a nursing home is intense and continuous. Residents are dependable and in need of care. The service from the nursing home compensates the lost capabilities of the resident. In a way, the service provider becomes part of the resident by supporting the residents in what they are not able to do anymore. This refers to what in the service quality literature is described as co-creation of value (Prahalad and Ramaswamy, 2004, Vargo et al., 2008). However, the notion of co-creation is not clearly described (Grönroos and Ravald, 2010, p.10). Co-creation seems to refer to a process in which the service provider provides the resources from which the customer creates value. That is a more passive approach in which the customer is the actual creator of value. Co-creation actually refers to a joint activity in which value is created together by interaction. In other words, co-creation is a process in which the nursing home staff and the resident interact together in the value creating process.

This refers to what Vargo calls a “service eco system” in which a staff member and resident form an individual service system (Vargo and Akaka, 2009, pp.38-39). From this perspective, the nursing home can be seen as a network of coupled eco systems in which each system has its own unique service features by the interaction of staff member and resident.

A service quality construct for nursing homes

The aim of this study was to provide a validated service quality construct for nursing home managers to improve resident focus and to increase resident and family satisfaction with the delivery of services in nursing homes. The findings from this study provide building blocks to create a service quality construct for nursing homes. This construct must be seen from the perspective of marketing and from the perspective of quality.

The perspective of marketing is first of all how to manage the expectations of potential residents and family, to by what they find important instead of what they expect from the service delivery. Potential residents and family members do not know what to expect and fear moving to a nursing home because they expect that the nursing home will change their lives from what they were used to and is therefore experienced as a negative choice. By recognising this fear and focussing on that, the service delivery will be adjusted to what is important in their daily lives, nursing homes can profile themselves in the market and make the transition to the life in a nursing home easier.

Secondly, location (close to relatives) and reputation play a major role in the decision of choosing a particular nursing home next to the room. This suggests that the marketing strategy must also include the nursing home's reputation and that marketing must be focussed on local markets.

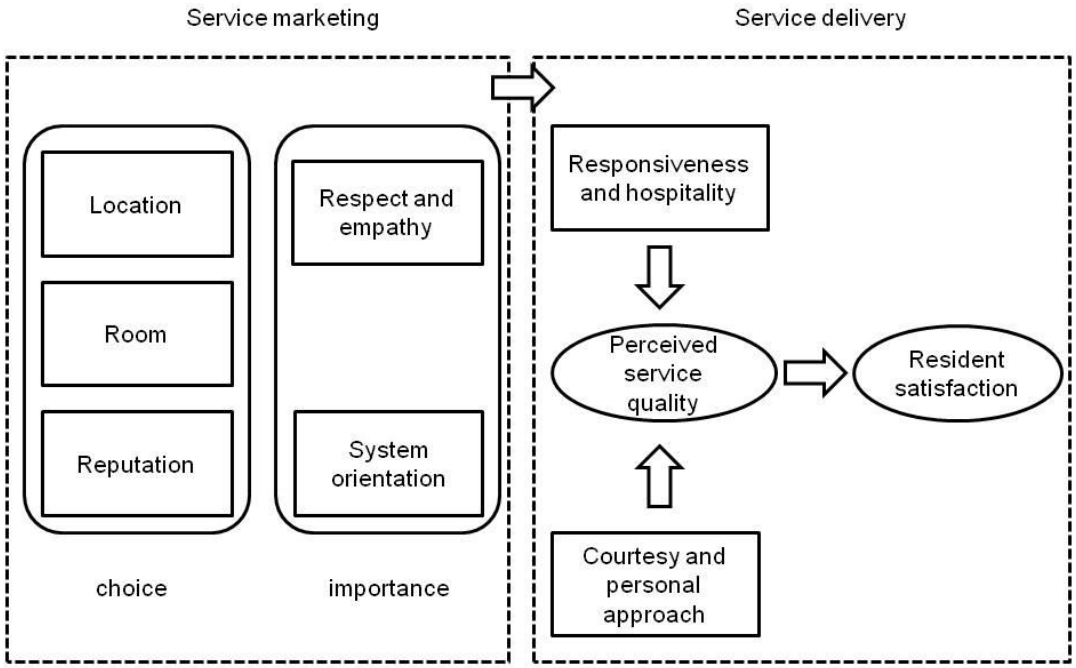
The perspective of quality is to manage the aspects of service delivery that contribute most to perceived service quality. These aspects are about how the staff respond to the residents requests, about hospitality aspects like a wider choice of food and drink, and activities throughout the day, about the courtesy in the interaction between staff and residents and the personal approach of the staff towards the resident and family. The finding shows that perceived service has predictive power to resident satisfaction, focussing on these aspects of service delivery will ultimately increase the residents satisfaction and therefore the reputation of the nursing home.

Combined with the findings of both factor analyses on importance and experience, the reference point of residents and family members mainly focuses on the interaction between staff and residents. It can be seen from the service quality literature that the service encounter in nursing homes is an individualised and customised service eco system in which resident and staff are co-creating value. This is confirmed by the findings that the interactional aspects of services are seen as most important and contribute most to perceived service quality. It refers to what Grönroos has described as “functional quality”. The finding that reputation is also key to the choice of a nursing home confirms the important role of “image” in Grönroos’ model about service quality (Grönroos, 2007).

In other words, the findings of this study confirm that Grönroos’ service quality construct is applicable as a foundation for a service quality construct in nursing homes, while the study was based on another service quality construct, the SERVQUAL model.

The findings of this study can be summarized in the following figure:

Figure 14: service quality construct for nursing homes



In this figure two perspectives are displayed, the perspective of service marketing and the perspective of service delivery. The perspective of service marketing contains two aspects, choice and importance. The choice aspects “location”, “room” and “reputation” are the main determining dimensions for choosing a nursing home while the importance aspects “respect and empathy” and “system orientation” are the main dimensions representing what residents and family members find important. Expectations about the service delivery can be created towards potential residents and family members by involving the importance dimensions in the marketing strategy.

In the perspective of the service delivery in the nursing home the aspects “responsiveness and hospitality” and “courtesy and personal approach”

determine perceived service quality. Eventually, perceived service quality is a determinant of resident satisfaction.

5.2 Conclusions

This section summarises the key outcomes of the research and addresses the research design, the measurement instrument and the sample.

Core conclusions

The core conclusions of this study are:

Dimensionality has similarities and key differences to those suggested in SERVQUAL. Some items were an issue of context. However, system orientation has been identified as a new and important dimension in this service.

The notion of ‘expectations’ as the basis of gap analysis is inappropriate in this sector. Instead, ‘importance’ was appropriate and this in keeping with the discussion, is lost to an extent in many replication studies using SERVQUAL, that importance is in fact, a proxy for expectations.

Disconfirmation has limited use for the management of service quality. In this situation, the notion of quality as a long-term experience is the central concern.

Service quality experiences have clear and demonstrable links to overall satisfaction and so by managing the dimensions of experienced quality, it is

possible to indirectly influence satisfaction and thus overall positive attitudes to the service.

There is a clear construct that emerges from this research that has been validated as a model on which to base the management of quality in nursing homes (see figure 14).

Research design

The question arises if the chosen research design is appropriate to investigate service quality concerning expectations about and experiences with nursing home services. In this design the expectations were measured retrospective and simultaneously with measurement of experiences. Residents and family members were asked to describe what they found important while the residents or their loved ones were already living in the nursing home and were receiving services. The question is how the situation of being in a nursing home and being dependent on staff biasing these results. A longitudinal case design could be more appropriate in measuring expectations or importance and for investigating how these expectations evolve prior to, just after moving to a nursing home, and after a longer period of residency. However, from this study it became clear that residents and family members had no preconceptions of what they could expect from the services in the nursing home. Therefore, a study of the evolvement of expectations of potential residents over time must include how these expectations originated as part of an expectations framework.

The measurement instrument

The measurement instrument is a modification of the SERVQUAL questionnaire. The Likert scale used in the SERVQUAL questionnaire was also modified. The modifications have resulted in different values for importance and experiences on the five point scale. This makes it questionable as to whether the disconfirmation calculations as done in this study, are not biased by the different values on the importance and experience scale. This can influence the perceived service quality construct as defined by the difference between expectations and the actual performance (Grönroos, 1982; Parasuraman et al., 1988). Therefore perceived service quality was measured by a single question of how respondents perceived the quality of the service delivery in this nursing home. This other approach in measuring perceived service quality has not been validated.

The sample

Two critical remarks can be made about the sample. The first one is about the involvement of family members of residents with dementia alongside a group of residents with physical limitations and the second one is about the composition of the sample.

The involvement of family members to represent residents with dementia is a way to involve residents with dementia. However, the family members are not the spokesmen of the residents with dementia but give their own opinion

about the service for their loved ones. This is a different approach from asking them what they think their loved one would think about the service delivery. This approach was chosen after the finding that family members do not know how their loved one would think in the actual situation because the mind has been changed due to dementia which leads to a situation in which family members do not fully understand their loved one anymore.

The composition of the sample is unbalanced in the sense that the family members sample in the quantitative phase of this study is five times greater than the residents sample. This could have influenced the outcome of the data analysis in the sense that the majority of the data reflects the opinions of the family members. However, the data analysis also shows evidence that there is no difference between the residents and family sample.

5.3 Contribution to management

The Doctor of Business Administration programme of the Bradford University School of Management has the objective to “make a significant contribution to the enhancement of professional practice in your area of business or management” (Bradford University, 2012).

The aim of this study reflects this objective and is to provide a validated service quality construct for nursing home managers to increase resident focus. So this study is meant for the management of nursing homes with the ultimate goal to improve the service quality for their residents. The contribution to the management knowledge is significant. First of all it became clear that reputation and location are key for the choice of a nursing

home, rather than the room, while many nursing home managers think that the room is key in the choice of a nursing home. Another finding is that residents and family members have no expectations about the services in a nursing home. They know what they find important but cannot imagine how the service delivery will be in a nursing home.

These findings give an indication for a marketing strategy for nursing homes. The marketing strategy must not focus on the services that they deliver, but on the aspects that they find important to enhance the quality of life of the residents. It is important that the nursing home emphasizes in their contact with potential residents and family members that they find respect and empathy in the interaction with residents most important, and that individual choice directs the way services are delivered instead of how processes are organised. Another finding is that the marketing strategy of a nursing home must not only aim at potential residents and their family but also aim at physicians.

The findings also give managers of nursing homes an insight into what aspects determine the perception of the service quality. A proper response to residents requests is crucial as is the case with hospitality aspects such as food and drink, a helpful attitude and activities during the day.

These aspects gain importance in matters to be dealt with by reason of the insight that the perception of the service delivery also predicts the satisfaction of residents.

With the findings in this study, nursing home managers are able to increase their client focus by creating a marketing strategy, and improving the quality

of their services by focussing on the service delivery *experience,* instead of the service delivery *organisation* to improve the client satisfaction.

The experience can be increased by the vision that service delivery is a result of co-creation between the resident and the staff member.

With worldwide ageing societies and the current negative image of nursing homes, the findings of the study contribute towards a shift in a more client oriented situation and therefore a more positive image of the nursing home sector in the future.

5.4 Contribution to science

The findings of this study contribute to science especially to the body of knowledge and measurement of service quality. This study adds new insights about service quality in nursing homes, the application and validation of established service quality concepts in nursing homes and gives input for service marketing research.

This study has tried to understand key concepts in the service quality literature in the context of a nursing home. This has led to another understanding of expectations by residents and family members of residents with dementia. It became evident that key concepts need to be adjusted before they can be applied in nursing homes. The context of a nursing home is different from the other service industries. Moving to a nursing home is seen as a negative choice as opposed to the purchase of a service in other industries. The interaction between provider and consumer is long and permanent, 24 hours a day, 7 days a week. The purchaser of the service is

mostly not the user of the service and the user is very dependent on others in the service delivery. This makes the application of existing service quality models on nursing home services complex and difficult.

A common feature of service quality in nursing homes with other service industries is that the concept of service quality can be viewed from two dimensions, service marketing and service delivery. This confirms the findings in the service quality literature where service quality constructs are linked to service marketing (Fisk et al., 1993).

The SERVQUAL model is applied in many studies about service quality in nursing homes without investigating the underlying paradigms (Steffen and Nystrom, 1997; Duffy,1997, 2001; Wang et al., 2007). The findings in this study indicate that disconfirmation is not the foundation under perceived service quality in the context of nursing homes. This would challenge the validity of the studies using the SERVQUAL instrument to measure service quality in nursing homes.

It became evident from this study that two key concepts of Grönroos' service quality model came up as essential elements in the service quality construct for nursing homes: the interaction between resident and staff, in other words, the way the services are provided (functional quality) and the reputation of the nursing home (the image).

5.5 Suggestions for further research

The findings of this study also give scope for further research. A replication study with a bigger and more balanced sample can test the generalizability of the service quality construct as found in this study. To diagnose the customer focus in a nursing home, nursing home management should be involved and the outcomes of the analysis of these data should be compared with the data of residents and family members. This can give an indication of how aligned the opinions of nursing home managers are with the residents and family members of residents with dementia. The involvement of family members of residents with physical limitations can facilitate a comparison to be made between their opinions and those of their loved one.

Finally, a longitudinal multi-case study of how expectations are formed and evolve in a situation prior to moving to a nursing home, shortly after moving to a nursing home, and after a certain period of residency must give insight into the construct of “expectations” in the nursing home sector.

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APPENDIX 1. FREQUENCY DISTRIBUTIONS OF IMPORTANCE VARIABLES BY THEME

Table 1 Frequency distributions of importance variables: Tangibles							
	very important	important	no opinion	slightly unimportant	un-important	Mean	SD
	Privacy						
n=260	n= 80 (30.8 %)	n=157 (60.4%)	n=8 (3.1 %)	n=15 (3.8 %)	n= - (- %)	1.84	.738
	Choice of food and drinks						
n=261	n= 55 (21.1%)	n= 139 (53.3%)	n=28 (10.7%)	n=38 (14.6%)	n= 1 (.4%)	2.20	.948
	A neat staff appearance						
n=252	n= 45 (17.9%)	n=164 (65.1%)	n=25 (9.9%)	n=16 (8.3%)	n= 2 (.8%)	2.07	.775
N=263							

Table 2 Frequency distributions of importance variables: Reliability							
	very important	important	no opinion	slightly unimportant	un-important	Mean	SD
	When the staff promises to come to me within a certain time frame they do so						
n=260	n=130 (50 %)	n=123 (47.3%)	n=4 (1.5%)	n= 3 (1.2%)	n= - (-%)	1.54	.591
	Sincere interest in solving my problem						
n=261	n=168 (64.4%)	n=90 (34.5%)	n= 1(.4%)	n= 2 (.8%)	n=- (-%)	1.38	.538
	Not having to ask twice before something is done for me						
n=262	n=128 (48.9%)	n=133 (50.8%)	n= - (-%)	n=1 (.4%)	n=- (-%)	1.52	.523
N=263							

Table 3 Frequency distributions of importance variables: Responsiveness							
	very important	important	no opinion	Slightly unimportant	un-important	Mean	SD
	Information about which activities are organised during the day						
n=261	n=30 (11.5 %)	n=133 (51%)	n= 36 (13.8%)	n=59(22.6%)	n= - (-%)	2.51	1.002
	Immediate response when I am calling						
n=260	n=80 (30.8 %)	n=159(61.2%)	n=17 (6.5%)	n=4 (1.5%)	n=- (-%)	1.79	.626
	Never too busy to respond to my requests						
n=261	n=70 (26.8%)	n=162(62.1%)	n=20(7.7%)	n=9 (3.4%)	n= - (- %)	1.88	.685
N=263							

Table 4 Frequency distributions of importance variables: Assurance							
	very important	important	no opinion	slightly unimportant	un-important	Mean	SD
	A professional attitude of the staff						
n=261	n= 98 (37.5%)	n=134 (51.3%)	n=15 (5.7%)	n=14 (5.4%)	n=- (-%)	1.79	.778
	No theft in the nursing home						
n=262	n=188 (71.8%)	n=58 (22.1%)	n=9 (3.4%)	n=6 (2.3%)	n=1 (.4%)	1.37	.699
	The staff avoids confronting residents with dying or deceased persons						
n=260	n=65 (25%)	n=80 (30.8%)	n=47 (18.1%)	n=61 (23.5%)	n=7 (2.7%)	2.48	1.177
	Polite staff						
n=263	n=107 (40.7%)	n=148 (56.3%)	n=7 (2.7%)	n=1 (.4%)	n=- (-%)	1.63	.558
	Respectful staff						
n=260	n=152 (58.5%)	n=107(41.2%)	n=1(.4%)	n=- (-%)	n=- (-%)	1.42	.502
	Every staff member can handle my questions						
n=263	n=75 (28.5%)	n=160 (60.8%)	n=16 (6.1%)	n=11 (4.2%)	n=1 (.4%)	1.87	.730
N=263							

Table 5 Frequency distributions of importance variables: Empathy							
	Very important	important	no opinion	slightly unimportant	un-important	Mean	SD
	Contact with the physician						
n=261	n=125 (47.9%)	n=118 (45.2%)	n=8 (3.1%)	n=9 (3.4%)	n=1 (.4%)	1.63	.741
	Participation in activities during the whole day						
n=260	n=67 (25.8%)	n=126 (48.5%)	n=21 (8.1%)	n=43 (16.5%)	n=3 (1.2%)	2.19	1.036
	Time to talk about what bothers me						
n=263	n=121 (46%)	n=131 (49.8%)	n=9 (3.4%)	n=2 (.8%)	n=- (-%)	1.59	.598
	Keeping the quality of life as high as possible						
n=262	n=166 (63.4%)	n=91 (34.7%)	n=3 (1.1%)	n=1 (.4%)	n=1 (.4%)	1.40	.576
	Reckon with personal habits (lifestyle)						
n=262	n=98 (37.4%)	n=146 (55.7%)	n=15 (5.7%)	n=3 (1.1%)	n=- (-%)	1.71	.626
	Comforting when I am sad or lonely						
n=261	n=158 (60.5%)	n=90 (34.5%)	n=6 (2.3%)	n=4 (1.5%)	n=3 (1.1%)	1.48	.726
	Connecting with other residents						
n=262	n=38 (14.5%)	n=148 (56.5%)	n=31 (11.8%)	n=42 (16%)	n=3 (1.1%)	2.33	.950
N=263							

Table 6 Frequency distributions of importance variables: System orientation							
	very important	**important**	**no opinion**	**slightly unimportant**	**un-important**	**Mean**	**SD**
	Involvement in making decisions about me						
n=261	n=122 (16.7%)	n=99 (37.9%)	n=21(8%)	n=18 (6.9%)	n=1(.4%)	1.76	.877
	That I can decide when I go to bed and get up						
n=262	n=56 (21.4%)	n=135 (51.5%)	n=35 (13.4%)	n=31 (11.8%)	n=5 (1.9%)	2.21	.975
	That I can decide when I eat						
n=262	n=19 (7.3%)	n=99 (37.8%)	n=54 (20.6%)	n=77 (29.2%)	n=13 (5%)	2.87	1.071
	That I can decide which clothes I want to wear						
n=262	n=41 (15.6%)	n=143 (54.6%)	n=28 (10.7%)	n=45 (17.2%)	n=5 (1.9%)	2.35	1.001
	That I can decide when I want to go out						
n=259	n=37(14.3%)	n=122 (47.1%)	n=48 (18.5%)	n=46 (17.8%)	n=6 (2.3%)	2.47	1.016
N=263							

APPENDIX 2. FREQUENCY DISTRIBUTIONS OF EXPERIENCE VARIABLES BY THEME

Table 1 Frequency distributions of experience variables: Tangibles							
	very good	good	average	Poor	very poor	Mean	SD
	Privacy						
n=252	n=28 (11.1%)	n=143 (56.7%)	n=66 (26.2%)	n=14 (5.8%)	n=1 (.4%)	2.27	.747
	Choice of food and drinks						
n=258	n=19 (7.4%)	n=154 (59.7%)	n=61 (23.6%)	n=20 (7.8%)	n=4 (1.6%)	2.36	.793
	Neat staff appearance						
n=258	n=19 (7.4%)	n=179 (69.4%)	n=57 (22.1%)	n=3 (1.2%)	n=-(-%)	2.17	.580
N=262							

Table 2 Frequency distributions of experience variables: Reliability							
	very good	good	average	Poor	very poor	Mean	SD
	When the staff promises to come within a certain time frame they do so						
n=254	n=19 (7.5%)	n=130 (51.2%)	n=89 (35%)	n=13 (5.1%)	n=3 (1.2%)	2.41	.753
	Sincere interest in solving my problem						
n=256	n=47 (18.4%)	n=142 (55.5%)	n=58 (22.7%)	n=8 (3.1%)	n=1 (.4%)	2.12	.748
	Not having to ask things twice before something is done for me						
n=257	n=22 (8.6%)	n=125 (48.6%)	n=89 (34.6%)	n=18 (7%)	n=3 (1.2%)	2.44	.794
N=262							

Table 3 Frequency distributions of experience variables: Responsiveness							
	very good	good	average	Poor	Very Poor	Mean	SD
	Information about which activities are organised during the day						
n=249	n=11 (4.4%)	n=116 (46.6%)	n=89 (35.7%)	n=26 (10.4%)	n=7 (2.8%)	2.61	.841
	Immediate response when I am calling						
n=249	n=15 (6%)	n=122 (49%)	n=96 (38.6%)	n=14 (5.6%)	n=2 (.8%)	2.46	.729
	Never too busy to respond to my requests						
n=252	n=16 (6.3%)	n=133 (52.8%)	n=88 (34.9%)	n=14 (5.6%)	n=1 (.4%)	2.41	.711
N=262							

Table 4 Frequency distributions of experience variables: Assurance							
	very good	good	average	poor	very poor	Mean	SD
	A professional attitude of the staff						
n=258	n=24 (9.3%)	n=132 (51.2%)	n=93 (36%)	n=8 (3.1%)	n=1 (.4%)	2.34	.706
	No theft in the nursing home						
n=256	n=46 (18%)	n=109 (42.6%)	n=61 (23.8%)	n=24 (9.4%)	n=16 (6.3%)	2.43	1.083
	The staff avoids confronting residents with dying or deceased persons						
n=248	n=34 (13.7%)	n=148 (59.7%)	n=57 (23%)	n=7 (2.8%)	n=2 (.8%)	2.17	.724
	Polite staff						
n=261	n=45 (17.2%)	n=190 (72.8%)	n=25 (9.6%)	n=1 (.4%)	n=- (-%)	1.93	.529
	Respectful staff						
n=258	n=49 (19%)	n=169 (65.5%)	n=38 (14%)	n=3 (1.2%)	n=1 (.4%)	1.98	.642
	Every staff member can handle my questions						
n=256	n=18 (7%)	n=112 (43.8%)	n=115(44.9%)	n=9 (3.5%)	n=2(.8%)	2.47	.713
N=262							

Table 5 Frequency distributions of experience variables: Empathy							
	very good	good	average	poor	very poor	Mean	SD
	Contact with the physician						
n=253	n=30(11.9%)	n=127 (50.2%)	n=67 (26.5%)	n=24 (9.5%)	n=5 (2%)	2.40	.887
	Participation in activities during the whole day						
n=253	n=22 (8.7%)	n=102 (40.3%)	n=102(40.3%)	n=22 (8.7%)	n=5 (2%)	2.55	.847
	Time to talk about what bothers me						
n=253	n=29 (11.5%)	n=150 (59.3%)	n=64 (25.3%)	n=9 (3.6%)	n=1 (.4%)	2.22	.706
	Keeping the quality of life as high as possible						
n=257	n=44 (17.1%)	n=150 (58.4%)	n=55 (21.4%)	n=6 (2.3%)	n=2 (.8%)	2.11	.733
	Reckon with personal habits (lifestyle)						
n=258	n=33 (12.8%)	n=145 (56.2%)	n=67 (26%)	n=12 (4.7%)	n=1 (.4%)	2.24	.745
	Comforting when sad or lonely						
n=253	n=40 (15.8%)	n=150 (59.3%)	n=54 (21.3%)	n=8 (3.2%)	n=1 (.4%)	2.12	.720
	Connecting with other residents						
n=258	n=14 (5.4%)	n=105 (40.7%)	n=114(44.2%)	n=21 (8.1%)	n=4 (1.8%)	2.6	.779
N=262							

Table 6 Frequency distributions of experience variables: System orientation							
	very good	**good**	**average**	**poor**	**very poor**	**Mean**	**SD**
	Involvement in making decisions about me						
n=258	n=30 (11.6%)	n=146 (56%)	n=64 (24.8%)	n=17 (6.6%)	n=1 (.4%)	2.28	.768
	That I can decide when I go to bed and get up						
n=248	n=26 (10.5%)	n=140 (56.5%)	n=64 (25.8%)	n=16 (6.5%)	n=2 (.8%)	2.31	.776
	That I can decide when I eat						
n=242	n=11 (4.5%)	n=125 (51.7%)	n=82 (33.9%)	n=22 (9.1%)	n=2 (.8%)	2.5	.758
	That I can decide which clothes I want to wear						
n=246	n=28 (11.4%)	n=147 (59.8%)	n=56 (22.8%)	n=14 (5.7%)	n=1 (.4%)	2.24	.742
	That I can decide when I want to go out						
n=239	n=22 (9.2%)	n=87 (36.4%)	n=92 (38.5%)	n=33 (13.8%)	n=5 (2.1%)	2.63	.907
N=262							

APPENDIX 3. SCREE PLOTS OF IMPORTANCE AND EXPERIENCE FACTORS

Figure 1: Scree plot importance variables

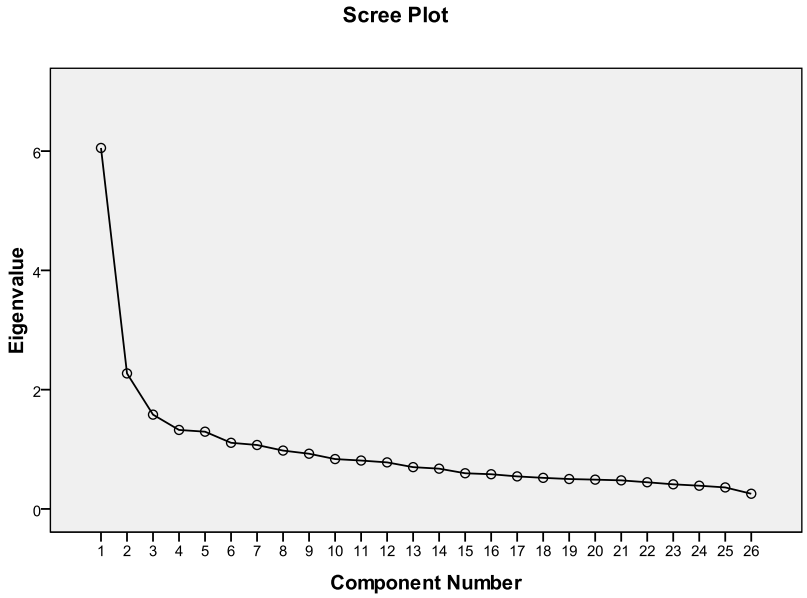
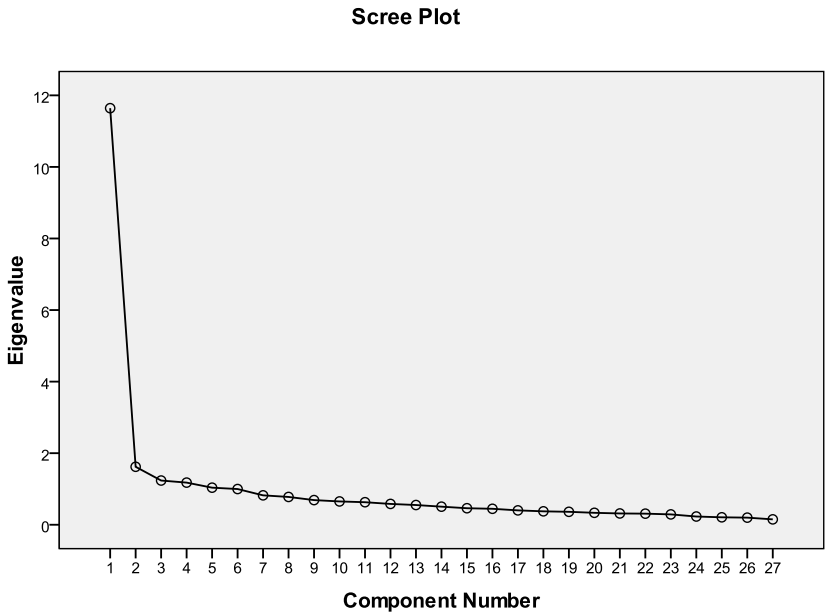


Figure 2: scree plot experience variables



APPENDIX 4. VARIANCES BETWEEN RESIDENT AND FAMILY RESPONDENTS

Table 1. Levene's test for equality of variances between residents and family members for SERVQUAL dimensions

	F	Sig	t	df	Sig (2 tailed)
The building, amenities and room (tangibles)					
Equal variances assumed	3.318	.070	1.800	208	.073
Equal variances not assumed			1.609	45.840	.115
Keeping promises (reliability)					
Equal variances assumed	.041	.839	.940	208	.348
Equal variances assumed			.975	52.495	.334
Fast response when needed (responsiveness)					.232
Equal variances assumed	13.923	.000	1.200	208	
Equal variances assumed			.989	43.329	.328
Professionalism of staff (assurance)					
Equal variances assumed	6.161	.014	-3.101	208	.002
Equal variances assumed			-2.678	44.706	.010
Personal attention (empathy)					
Equal variances assumed	5.275	.023	-.976	208	.330
Equal variances assumed			-.889	46.531	.379

Table 2: Prioritisation of original SERVQUAL dimensions (resident scores)							
	Most Important	**Very important**	**Important**	**Slightly Important**	**Least important**	**Mean**	**SD**
	Personal attention (empathy)						
n=36	n=19 (52.8%)	n=4 (11.1%)	n=3 (8.3%)	n=9 (25%)	n=1 (2.8%)	3.86	1.376
	Professionalism of staff (assurance)						
n=36	n=8 (22.2%)	n=10 (27.8%)	n=9 (25%)	n=4 (11.1%)	n=5 (13.9%)	3.33	1.331
	Keeping promises (reliability)						
n=36	n=1 (2.8%)	n=12 (33.3%)	n=10 (27.8%)	n=12(33.3%)	n=1 (2.8%)	3.00	.956
	The building amenities and rooms (tangibles)						
n=36	n= 6 (16.7%)	n=4 (11.1%)	n=6 (6.7%)	n=6 (16.7%)	n=14(38.9%)	2.50	1.521
	Fast response when needed (responsiveness)						
n=36	n=2 (5.6%)	n=6 (16.7%)	n=8 (22.2%)	n=5 (13.9%)	n=15(41.7 %)	2.31	1.327
N=40							

Table 3: Prioritisation of original SERVQUAL dimensions (family scores)							
	Most Important	**Very important**	**Important**	**Slightly Important**	**Least important**	**Mean**	**SD**
	Personal attention (empathy)						
n=174	n=87 (50%)	n=45 (25.9%)	n=19 (10.9%)	n=13 (7.5%)	n=10 (5.7%)	4.08	1.195
	Professionalism of staff (assurance)						
n=174	n=64 (36.8%)	n=67 (38.5%)	n=20 (11.5%)	n=19 (10.9%)	n=4 (2.3%)	3.97	1.064
	Keeping promises (reliability)						
n=174	n=10 (5.7%)	n=31(17.8%)	n=67 (38.5%)	n=51 (29.3%)	n=15 (8.6%)	2.83	1.011
	Fast response when needed (responsiveness)						
n=174	n=4 (2.3%)	n=12 (6.9%)	n=31(17.8%)	n=73 (42%)	n=54 (31%)	2.07	.986
	The building amenities and rooms (tangibles)						
n=174	n=9 (5.2%)	n=19 (10.9%)	n=37 (21.3%)	n=18 (10.3%)	n=91(52.3%)	2.06	1.282
N=223							

APPENDIX 5. LETTER OF THE MEDICAL REVIEW ETHICS COMMITTEE THE NETHERLANDS

St. Elisabeth Ziekenhuis

MEDISCH ETHISCHE TOETSINGSCOMMISSIE

Telefoon : 013-5392122
Fax : 013-5393947
E-mail : METC@elisabeth.nl
Ons kenmerk : METC/jv/2011.106
Datum : 27 juni 2011

Dhr. F. Lapré
Postbus 41
4273 ZG HANK

'SERVQUAL in Nursing Homes: A Careful Approach to measure resident satisfaction about Quality of delivered Services.'

Dear mr Lapré,

On behalf of the Medical Review Ethics Committee of the St. Elisabeth Hospital I hereby declare that MREC-approval is not required for the above mentioned study. According to Dutch law, only clinical trials in which persons are subjected to procedures or are required to follow rules of behaviour, need to be submitted to an MREC for review and approval. In the opinion of the Committee this is not the case here.

Best regards,

mrs J. Verheijen-Langenberg, LLM

APPENDIX 6. APPROVAL LETTER OF UNIVERSITY OF BRADFORD RESEARCH ETHICS PANEL

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Freek Lapré
PO Box 41
4273ZG HANK
The Netherlands

23rd August 2011

Hi Freek

Ethics Application E.154
SERVQUAL in Nursing Homes: a careful approach to measure resident satisfaction about Quality of Delivered Services

Thank you for sending me your amended application in line with the comments made by the two reviewers and the Research Ethics Panel. I can now confirm that the reviewers feel that all their requirements have been met and the Chair feels that the Panel requirements have been addressed.

I can therefore confirm that the Chair of the Humanities, Social and Health Sciences Research Ethics Panel is happy to take Chair's action to approve your ethics application on behalf of the Panel. It is now in order for your research project to begin.

With best wishes

Lynda Nuttall

Lynda

Lynda Nuttall
Research Support and Ethics Administrator
Research and Knowledge Transfer Support
University of Bradford
Bradford BD7 1DP

Tel: 01274 233170
l.d.nuttall@bradford.ac.uk

APPENDIX 7. SUPPORT LETTER OF ACTIZ

actiz
organisatie van zorgondernemers

actiz 5 jaar

Freek Lapré
Postbus 41
4273 29 HANK

Onderwerp onderzoek van de heer drs. Freek A.L. Lapré

datum
18 november 2011

ons kenmerk
AG/11u.1207

in behandeling bij

doorkiesnummer
(030) 27 39 756

pagina
1/2

Aan de bestuurders en directies van instellingen
welke om medewerking zijn gevraagd aan
het onderzoek van de heer drs. Freek A.L. Lapré

Zeer geachte bestuurder/directeur,

U bent benaderd door de heer drs. Freek A.L. Lapré om aan zijn promotieonderzoek over het meten van cliëntervaringen over de geleverde diensten van uw organisatie mee te werken.
ActiZ hecht grote waarde aan dit onderzoek en acht de uitvoering en uitkomsten van dit onderzoek van toegevoegde waarde voor het verbeteren van de kwaliteit van de dienstverlening in de ouderenzorg.

Zoals u weet is er een discussie gaande over de CQ[1]-index als enig kwaliteitsmeetinstrument voor cliënten van intramurale instellingen.
Het doel van dit onderzoek is een kwaliteitsmeetinstrument te valideren dat is gebaseerd op 1) enerzijds de verwachtingen van uw cliënten over de dienstverlening en 2) feitelijke ervaringen van uw cliënten met de dienstverlening. Het gemeten verschil tussen verwachtingen en ervaringen biedt directie en bestuur handvatten voor verbetering van de kwaliteit van de dienstverlening.

De door de Research Ethics Committee van de University of Bradford afgegeven goedkeuring van de onderzoeksopzet garandeert een zorgvuldige en geanonimiseerde uitvoering van het onderzoek.

[1] Consumer Quality-Index

Postadres Postbus 8258, 3503 RG Utrecht | **Bezoekadres** Oudlaan 4, 3515 GA Utrecht | www.actiz.nl |
T (030) 273 93 93 | **F** (030) 273 97 87 | **E** info@actiz.nl | **Bank** 69.96.50.038 | **KvK** 30216479 | **BTW** 8175.01.368.B.01

Tevens is het onderzoek ter toetsing voorgelegd aan een Nederlandse Medisch Ethische Commissie, die heeft geconcludeerd dat er geen toestemming nodig is in het kader van de Wet Mensgebonden Onderzoek (WMO).

Ik hoop dat u bereid en in staat bent om aan dit onderzoek deel te nemen.

Met vriendelijke groet,

drs. A. Koster
directeur

APPENDIX 8. SUPPORT LETTER OF LOC

LOC ZEGGENSCHAP IN ZORG

Drs. F.A.L. Lapré
Postbus 41
4273 ZG Hank

Utrecht, december 2011
Betreft: onderzoek naar meten van kwaliteit van zorg

Geachte leden van de cliëntenraad,

De heer Freek Lapré doet promotieonderzoek naar het meten van clientenervaringen als het gaat om de zorg en diensten die zijn van uw organisatie ontvangen. Hij zou daarbij ook graag uw organisatie betrekken. Als grootste cliëntenorganisatie in de langdurende zorg zouden wij u en uw zorgorganisatie willen vragen om aan dat onderzoek deel te nemen. Wij vinden het vanuit onze visie op 'Waarde-volle zorg'[1] van belang dat er verdiepend aandacht komt voor de functie en waarde van het meten van hoe cliënten hun zorg beleven. In de discrepantie tussen de verwachtingen die een cliënt heeft van de zorg en dat wat hij uiteindelijk ervaart ligt juist ook een mogelijkheid besloten om zorg te kunnen verbeteren.

De onderzoeksopzet, zoals u die ook kunt inzien, garandeert de anonimiteit van deelnemende organisaties.

In de hoop dat u breid wilt zijn een bijdrage te leveren, dank ik u alvast hartelijk voor de te nemen moeite.

Vriendelijke groeten,

Drs. Y.C.M. van Gilse

Directeur/bestuurder LOC Zeggenschap in zorg

[1] U kunt de visie op 'Waarde-volle zorg' inzien en gratis downloaden via www.loc.nl

APPENDIX 9. QUESTIONNAIRE RESIDENT VERSION (TRANSLATED TO ENGLISH)

Questionnaire

Resident

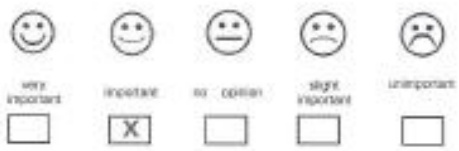
Your are living in a nursing home. We investigate what expectations and experiences are of residents in a nursing home.
This questionnaire asks you about your expectations and experiences with the care and services in the nursing home you are living. By filling in this questionnaire it can help to improve the quality of care and services in the nursing home.
Your information is confidential, the questionnaire is completely anonymous. Of course, completing the questionnaire is voluntary.

The first part consists out of statements multiple choice questions about what you think is important for you in the nursing home.

The second part consists out of the same questions but now we ask you how you experience the care and services in this nursing home.

The third and final part consists out of general questions which are important for our data-analysis.

The statements can be answered by ticking on of the boxes in this scale. The smileys give an indication of your answer.
Example: if you think that it is important to you fill in the answer as follows:



	very important	important	no opinion	slight important	unimportant
Not have to ask things more than once before something is done	☐	☒	☐	☐	☐

Please tick **in** the box and not in between. This makes the answer useless.

Completing the questionnaire takes about 30 minutes of your time to complete. Yuo can ask the person who gave you the questionnaire to help you completing it.

We want to thank you very much for your cooperation !

Sincerely yours,

Freek Lapré

PART 1

During the stay in a nursing home I find the following **important** in the care and services:

	 very important	important	no opinion	slight important	unimportant
Privacy	☐	☐	☐	☐	☐
A variety of food and drinks that can be chosen from	☐	☐	☐	☐	☐
A neat staff appearance	☐	☐	☐	☐	☐
When the staff promises to come within a certain time frame they do so	☐	☐	☐	☐	☐
Sincere interest in solving my problem	☐	☐	☐	☐	☐

During the stay in a nursing home I find the following **important** in the care and services:

	 very important	important	no opinion	slight important	unimportant
Not have to ask things more than once before something is done for me	☐	☐	☐	☐	☐
Information what is happening during the day	☐	☐	☐	☐	☐
Immediate response I am is calling	☐	☐	☐	☐	☐
Never too busy to respond to my requests	☐	☐	☐	☐	☐
A professional attitude of the staff	☐	☐	☐	☐	☐
No theft in the nursing home	☐	☐	☐	☐	☐

During the stay in a nursing home I find the following **important** in the care and services:	 very important	 important	 no opinion	 slight important	 unimportant
Avoiding deceased or dying persons	☐	☐	☐	☐	☐
Polite staff	☐	☐	☐	☐	☐
Respectful staff	☐	☐	☐	☐	☐
Every staff member can handle my questions	☐	☐	☐	☐	☐
Contact with the physician	☐	☐	☐	☐	☐
Participation in activities during the whole day	☐	☐	☐	☐	☐

During the stay in a nursing home I find the following **important** in the care and services:	 very important	 important	 no opinion	 slight important	 unimportant
Time to talk about what bothers me	☐	☐	☐	☐	☐
Keeping the quality of my life as high as possible.	☐	☐	☐	☐	☐
Reckoning with my personal habits (lifestyle)	☐	☐	☐	☐	☐
Comforting when I am sad or lonely	☐	☐	☐	☐	☐
Connecting with other residents	☐	☐	☐	☐	☐
Involvement in making decisions about me	☐	☐	☐	☐	☐

During the stay I find the following **important** in the care and services:

That I can decide:	 very important	important	no opinion	slight important	unimportant
when I go to bed and get up	☐	☐	☐	☐	☐
when I go to eat	☐	☐	☐	☐	☐
what clothes I want to wear	☐	☐	☐	☐	☐
when I want to go out	☐	☐	☐	☐	☐

	 very good	good	fair	poor	very poor
How do you perceive the quality of the care and services in this nursing home?	☐	☐	☐	☐	☐

Can you please give a score about what you think is the most important aspect by giving it a score from 1 – 5. **You can only give one score at a time so giving a 4 twice is not permitted !** . 5 = most important 4 = very important 3 = important 2 = slight important 1 = least important	
The building, amenities and rooms	
Keeping promises	
Fast response when needed	
Professionalism of staff	
Personal attention	

PART 2

I **experience** the following in the care and services:

	very good	good	average	poor	very poor
Privacy	☐	☐	☐	☐	☐
A variety of food and drinks that can be chosen from	☐	☐	☐	☐	☐
A neat staff appearance	☐	☐	☐	☐	☐
When the staff promises to come within a certain time frame they do so	☐	☐	☐	☐	☐
Sincere interest in solving my problem	☐	☐	☐	☐	☐

I **experience** the following in the care and services:

	very good	good	average	poor	very poor
Not have to ask things more than once before something is done	☐	☐	☐	☐	☐
Information what is happening during the day	☐	☐	☐	☐	☐
Immediate response I am calling	☐	☐	☐	☐	☐
Never too busy to respond to my requests	☐	☐	☐	☐	☐
A professional attitude of the staff	☐	☐	☐	☐	☐
No theft in the nursing home	☐	☐	☐	☐	☐

I **experience** the following in the care and services:

	very good	good	average	poor	very poor
Avoiding deceased or dying persons	☐	☐	☐	☐	☐
Polite staff	☐	☐	☐	☐	☐
Respectful staff	☐	☐	☐	☐	☐
Every staff member can handle my questions	☐	☐	☐	☐	☐
Contact with the physician	☐	☐	☐	☐	☐
Participation in activities during the whole day	☐	☐	☐	☐	☐

I **experience** the following in the care and services:	very good	good	average	poor	very poor
Time to talk about what bothers me	☐	☐	☐	☐	☐
Keeping the quality of my life as high as possible.	☐	☐	☐	☐	☐
Reckoning with my personal habits (lifestyle)	☐	☐	☐	☐	☐
Comforting when I am sad or lonely	☐	☐	☐	☐	☐
Connecting with other residents	☐	☐	☐	☐	☐
Involvement in making decisions about her/him	☐	☐	☐	☐	☐

I **experience** the following in the care and services:	very good	good	average	poor	very poor
That I can decide:					
when I go to bed and get up	☐	☐	☐	☐	☐
when I go to eat	☐	☐	☐	☐	☐
what clothes I want to wear	☐	☐	☐	☐	☐
when I want to go out	☐	☐	☐	☐	☐

	perfect	extremely well	OK	no opinion	not really	badly	not at all
How does the nursing home meet your needs ?	☐	☐	☐	☐	☐	☐	☐

	delighted	pleased	OK	no opinion	a bit dis-appointed	unhappy	awful
How do you feel about this nursing home ?	☐	☐	☐	☐	☐	☐	☐

PART 3

Finally, please tell us a little about yourself to help with our analysis – no names needed.

What is your age? ..... years Are you: female ☐ male ☐

How long do you already live in this nursing home? ..... years

Who made the decision to move to the nursing home?		Where did you move from ?	
I did	☐	from home	☐
my family (children, siblings)	☐	from care home	☐
friends	☐	from rehabilitation centre	☐
the doctor	☐	from hospital	☐
others	☐		

Did you have multiple options for choosing a nursing home ? No ☐ Yes ☐

Please skip the next question.

How important were the following aspects in your choice for this nursing home ?

	very important	important	no opinion	slight important	unimportant
Reputation	☐	☐	☐	☐	☐
Previous experience	☐	☐	☐	☐	☐
Location	☐	☐	☐	☐	☐
The room	☐	☐	☐	☐	☐

Personal remarks:

Thank you very much
for your cooperation !

APPENDIX 10. QUESTIONNAIRE FAMILY VERSION (TRANSLATED TO ENGLISH)

Questionnaire

Family version

Your loved one (partner/parent/other family) is living in a nursing home suffering from dementia. We investigate what expectations and experiences are of residents in a nursing home. Residents with dementia cannot speak for themselves.
This questionnaire asks you about how you think that the expectations and experiences of your loved one are in the nursing home where she/he is living. By filling in this questionnaire it can help to improve the quality of care and services for your loved one in the nursing home.
Your information is confidential, the questionnaire is completely anonymous. Of course, completing the questionnaire is voluntary.

The first part consists out of statements multiple choice questions about what you think is important for your loved one in the nursing home.

The second part consists out of the same questions but now we ask you how you experience the care and services for your beloved one in this nursing home.

The third and final part consisits out of general questions which are important for our data-analysis.

The statements can be answered by ticking on of the boxes in this scale. The smileys give an indication of your answer.
Example: if you think that it is important to you fill in the answer as follows:

	very important	important	no opinion	slight important	unimportant
Not have to ask things more than once before something is done for my loved one	☐	☒	☐	☐	☐

Please tick **in** the box and not in between. This makes the answer useless.

Completing the questionnaire takes about 30 minutes of your time to complete. The completed questionnaire can be returned in the special return envelope that was sent with this questionnaire. **A stamp is not necessary !**

We want to thank you very much for your cooperation !

Sincerely yours,

Freek Lapré

PART 1

During the stay in a nursing home I find the following **important** to my loved one in the care and services:

	 very important	important	no opinion	slight important	unimportant
Privacy	☐	☐	☐	☐	☐
A variety of food and drinks that can be chosen from	☐	☐	☐	☐	☐
A neat staff appearance	☐	☐	☐	☐	☐
When the staff promises to come within a certain time frame they do so	☐	☐	☐	☐	☐
Sincere interest in solving a problem of my loved one	☐	☐	☐	☐	☐

During the stay of my loved one in a nursing home I find the following **important** to my loved one in the care and services:

	 very important	important	no opinion	slight important	unimportant
Not have to ask things more than once before something is done for my loved one	☐	☐	☐	☐	☐
Information what is happening during the day	☐	☐	☐	☐	☐
Immediate response he/she is calling	☐	☐	☐	☐	☐
Never too busy to respond to his/her requests	☐	☐	☐	☐	☐
A professional attitude of the staff	☐	☐	☐	☐	☐
No theft in the nursing home	☐	☐	☐	☐	☐

During the stay of my loved one in a nursing home I find the following **important** to my loved one in the care and services:

	 very important	important	no opinion	slight important	unimportant
Avoiding deceased or dying persons	☐	☐	☐	☐	☐
Polite staff	☐	☐	☐	☐	☐
Respectful staff	☐	☐	☐	☐	☐
Every staff member can handle his/her questions	☐	☐	☐	☐	☐
Contact with the physician	☐	☐	☐	☐	☐
Participation in activities during the whole day	☐	☐	☐	☐	☐

During the stay of my loved one in a nursing home I find the following **important** to my loved one in the care and services:

	 very important	important	no opinion	slight important	unimportant
Time to talk with my loved one about what bothers her/him	☐	☐	☐	☐	☐
Keeping the quality of his/her life as high as possible.	☐	☐	☐	☐	☐
Reckoning with his/her personal habits (lifestyle)	☐	☐	☐	☐	☐
Comforting when he/she is sad or lonely	☐	☐	☐	☐	☐
Connecting with other residents	☐	☐	☐	☐	☐
Involvement in making decisions about her/him	☐	☐	☐	☐	☐

During the stay of my loved one in a nursing home I find the following **important** to my loved one in the care and services:

	 very important	important	no opinion	slight important	unimportant
Avoiding deceased or dying persons	☐	☐	☐	☐	☐
Polite staff	☐	☐	☐	☐	☐
Respectful staff	☐	☐	☐	☐	☐
Every staff member can handle his/her questions	☐	☐	☐	☐	☐
Contact with the physician	☐	☐	☐	☐	☐
Participation in activities during the whole day	☐	☐	☐	☐	☐

During the stay of my loved one in a nursing home I find the following **important** to my loved one in the care and services:

	 very important	important	no opinion	slight important	unimportant
Time to talk with my loved one about what bothers her/him	☐	☐	☐	☐	☐
Keeping the quality of his/her life as high as possible.	☐	☐	☐	☐	☐
Reckoning with his/her personal habits (lifestyle)	☐	☐	☐	☐	☐
Comforting when he/she is sad or lonely	☐	☐	☐	☐	☐
Connecting with other residents	☐	☐	☐	☐	☐
Involvement in making decisions about her/him	☐	☐	☐	☐	☐

During the stay of my loved one in a nursing home I find the following **important** to my loved one in the care and services:

That my loved one can decide:	 very important	important	no opinion	slight important	unimportant
about her/his own bed times	☐	☐	☐	☐	☐
about her/his own meal times	☐	☐	☐	☐	☐
what clothes she/he wants to wear	☐	☐	☐	☐	☐
when she/he wants to go out	☐	☐	☐	☐	☐

	 very good	good	fair	poor	very poor
How do you perceive the quality of the care and services to your beloved one in this nursing home?	○	○	○	○	○

Can you please give a score about what you think is the most important aspect by giving it a score from 1 – 5. **You can only give one score at a time so giving a 4 twice is not permitted !** . 5 = most important 4 = very important 3 = important 2 = slight important 1 = least important	
The building, amenities and rooms	
Keeping promises	
Fast response when needed	
Professionalism of staff	
Personal attention	

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PART 2

I **experience** the following in the care and services to my love one:

	very good	good	average	poor	very poor
Privacy	☐	☐	☐	☐	☐
A variety of food and drinks that can be chosen from	☐	☐	☐	☐	☐
A neat staff appearance	☐	☐	☐	☐	☐
When the staff promises to come within a certain time frame they do so	☐	☐	☐	☐	☐
Sincere interest in solving a problem of my loved one	☐	☐	☐	☐	☐

I **experience** the following in the care and services to my love one:

	very good	good	average	poor	very poor
Not have to ask things more than once before something is done for my loved one	☐	☐	☐	☐	☐
Information what is happening during the day	☐	☐	☐	☐	☐
Immediate response he/she is calling	☐	☐	☐	☐	☐
Never too busy to respond to his/her requests	☐	☐	☐	☐	☐
A professional attitude of the staff	☐	☐	☐	☐	☐
No theft in the nursing home	☐	☐	☐	☐	☐

I **experience** the following in the care and services to my love one:

	very good	good	average	poor	very poor
Avoiding deceased or dying persons	☐	☐	☐	☐	☐
Polite staff	☐	☐	☐	☐	☐
Respectful staff	☐	☐	☐	☐	☐
Every staff member can handle his/her questions	☐	☐	☐	☐	☐
Contact with the physician	☐	☐	☐	☐	☐
Participation in activities during the whole day	☐	☐	☐	☐	☐

I **experience** the following in the care and services to my love one:

	very good	good	average	poor	very poor
Time to talk with my loved one about what bothers her/him	☐	☐	☐	☐	☐
Keeping the quality of his/her life as high as possible.	☐	☐	☐	☐	☐
Reckoning with his/her personal habits (lifestyle)	☐	☐	☐	☐	☐
Comforting when he/she is sad or lonely	☐	☐	☐	☐	☐
Connecting with other residents	☐	☐	☐	☐	☐
Involvement in making decisions about her/him	☐	☐	☐	☐	☐

I **experience** the following in the care and services to my love one:

That my loved one can decide:	very good	good	average	poor	very poor
about her/his own bed times	☐	☐	☐	☐	☐
about her/his own meal times	☐	☐	☐	☐	☐
what clothes she/he wants to wear	☐	☐	☐	☐	☐
when she/he wants to go out	☐	☐	☐	☐	☐

	perfect	extremely well	OK	no opinion	not really	badly	not at all
How does the nursing home meet your needs ?	☐	☐	☐	☐	☐	☐	☐

	delighted	pleased	OK	no opinion	a bit dis-appointed	unhappy	awful
How do you feel about this nursing home ?	☐	☐	☐	☐	☐	☐	☐

PART 3

Finally, please tell us a little about yourself to help with our analysis – no names needed.

What is your age? ..... years

Who is living in the nursing home ?

- partner ☐
- parent ☐
- sibling ☐
- others ☐

Are you: female ☐ male ☐

How long does your loved one already lived in this nursing home? ..... years

Who made the decision to move to the nursing home?

- I did ☐
- my family (children, siblings) ☐
- friends ☐
- the doctor ☐
- others ☐

Where did your loved one move from ?

- from home ☐
- from care home ☐
- from rehabilitation centre ☐
- from hospital ☐

Did you have multiple options for choosing a nursing home ? No ☐ Yes ☐

Please skip the next question.

How important were the following aspects in your choice for this nursing home ?

	very important	important	no opinion	slight important	unimportant
Reputation	☐	☐	☐	☐	☐
Previous experience	☐	☐	☐	☐	☐
Location	☐	☐	☐	☐	☐
The room	☐	☐	☐	☐	☐

Personal remarks:

Thank you very much
for your cooperation !

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