

EMPLOYEE-RELATED ANTECEDENTS OF THE WAITING EXPERIENCE AND SERVICE QUALITY IN OUTPATIENT CLINICS.

by

Stefanie De Man

ICM doctoral fellow

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Committee in charge:

Promotor: Prof. Dr. P. Gemmel
Co-promotor: Prof. Dr. P. Vlerick
Prof. Dr. R. Dierckx
Prof. Dr. J. Lemmink
Prof. Dr. R. Van Dierdonck
Prof. Dr. B. Van Looy
Prof. Dr. R. Paemeleire
Prof. Dr. E. Omey
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‘Elke grasspriet heeft een beschermengel die zich over hem heen buigt en fluistert, ‘Groeï, Groei’.

De Talmoed

Preface and acknowledgements

Service quality is not a term that is used explicitly in the practice of healthcare. In service marketing in general it is probably the single most important concept since Parasuraman, Zeithaml and Berry published in 1985 their first article. It becomes apparent from this thesis that service quality can be improved by creating the right work environment for customer-contact service employees and increasing job performance. Furthermore, service quality and customer satisfaction positively affect the relationship between service provider and service customer.

The undertaking of writing a dissertation is probably the ultimate experience for the Ph.D. candidate as well as for his advisors. Being empowered by my advisors I have learned a lot about economics, psychology and even medicine. My advisors gave me the opportunity to explore new and interesting paths. The quality of their coaching played a pivotal role in the completion of this dissertation. Apart from increasing my job satisfaction and performance, it instilled me with great confidence in the ultimate outcome of this project and left me with a feeling of both personal and professional accomplishment.

This dissertation is the result of an intensive research project, which started approximately four and a half years ago. Many persons have contributed to this dissertation in one way or another. I would like to take the opportunity to thank them. To begin with, I would like to thank my advisors, Prof. Paul Gemmel, Prof. Peter Vlerick and Prof. Rudi Dierckx for their unrelenting support, valuable ideas and the effort and energy they expended on the completion of this dissertation. In 1999, they brainstormed about a project including their specific interest fields. Economics, Psychology and Medicine met each other in a project that was called 'The dynamic relationship between productivity, work pressure, work intensity and service quality in ambulatory care clinics'. They attracted me as scientific co-worker to work on this

theme. I am deeply indebted to them for stimulating me to write and publish papers. Discussions with them were always a source of inspiration.

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I would also like to thank Prof. Peter Vlerick because under his inspiring and enthusiastic supervision I wrote my Master Thesis under his supervision. The enthusiasm that accompanied the writing of my Master Thesis let him suggest me to become scientific co-worker. He was always willing to listen to my ideas, to make remarks, to suggest alternatives and to divert my energy to the completion of this dissertation.

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I would like to thank my colleagues, Darline Vandaele and Valerie Vermeulen, for their assistance in collecting some of the data for this dissertation. They have done a wonderful job in taking care of the data collection process together with students of the faculty of economics and psychology (Mieke Decoussemaker, Nele Hubrechts, Nele Thiel, and Eveline Vermeulen). Their professional attitude and competence should be a role model for students to come.

In the last run to finish this dissertation Gaëtane Beernaert helped me with typographic problems. In those moments of stress (I experienced many of the studied employee-related constructs myself), she thought me how to make typographical changes in the dissertation that were necessary to create a logical and nice layout of the dissertation.

Many other colleagues of the faculty of Economics and Business Administration, the faculty of Psychology and Educational Sciences and the Vlerick Leuven Gent Management School, all supported me to finish this dissertation. Thanks to you all!

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I would like to express my feelings of gratitude towards the members of my graduation committee for reading the manuscript and providing me with valuable suggestions.

Having recognized the contribution of all the above, I need to emphasize that all the remaining weaknesses are my sole responsibility.

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NEDERLANDSTALIGE SAMENVATTING

MEDEWERKERSGERELATEERDE ANTECEDENTEN VAN DE WACHTERVARING EN KWALITEIT VAN DIENSTVERLENING IN POLIKLINIEKEN.

In de service management literatuur wordt de interactie tussen dienstverlener en klant, de zogenaamde ‘*service encounter*’, centraal gesteld. De ‘*service encounter*’ kan vanuit drie onderzoeksdomeinen uit service management bestudeerd worden: de organizationele theorieën, die het gedrag van de dienstverlenende medewerkers bestuderen, de operationeel management theorieën, die de dienstverleningsprocessen analyseren en service marketing, waarin het consumentengedrag centraal staat. Er is tot op heden onvoldoende inzicht en empirisch onderzoek naar de wisselwerking tussen de organizationele kenmerken van de organisatie (vb. de organisatie van de dienstverleningsprocessen die eventueel leiden tot lange wachttijden en de mate van controle over de activiteiten van de medewerkers), de reacties op deze organizationele kenmerken en persoonlijkheidskenmerken van de dienstverlenende medewerkers (vb. jobsatisfactie en klantgericht gedrag) en de reacties van de klant (vb. klantenevaluaties van de dienstverlening in de vorm van percepties van kwaliteit van dienstverlening en klantentevredenheid). De focus van dit doctoraat ligt op de impact van organisatiekenmerken en het gedrag van de dienstverlenende medewerkers op de klanten, met daarbij speciale aandacht voor de klantenevaluaties van de wachtervaring van de klanten.

Theoretisch kader.

Het is noodzakelijk om het medewerkersgedrag te analyseren en het bestaan van mogelijke veronderstellingen i.v.m. de impact van dit medewerkersgedrag op klantenevaluaties na te gaan. Gebaseerd op een uitgebreide literatuurstudie, beperkt onze onderzoeksofzet zich tot cruciale organisatiekenmerken en gedragskenmerken

van dienstverlenende medewerkers: jobvereisten, empowerment, self-efficacy, klantgerichtheid en jobsatisfactie.

In eerste instantie vonden we dat de impact van *jobstress* op klantenevaluaties een onderwerp is dat in voorgaande studies in verband met de relatie tussen dienstverlenende medewerker en klant weinig bestudeerd werd. We onderscheiden binnen de jobvereisten die aan de dienstverlenende medewerker worden gesteld kwantitatieve en kwalitatieve jobeisen. De kwantitatieve jobeisen zijn deze eisen die de job psychologisch en fysiek belastend maken. Deze kwantitatieve jobvereisten zijn terug te vinden in het 'Job Demands-Control Model' (jobvereisten-job controle model). Dit model stelt dat wanneer de jobvereisten hoog zijn en de mate van controle van de medewerker laag, dat de jobstevredenheid, mentale gezondheid en fysieke gezondheid laag zullen zijn. Onder kwalitatieve eisen verstaan we rol stress. De rol theorie onderscheidt rolconflict en rolambigüiteit. Rolconflict ontstaat wanneer de dienstverlenende medewerker geconfronteerd wordt met eisen van de organisatie, zijn supervisors en de klanten. Rolambigüiteit ontstaat wanneer er onvoldoende informatie gegeven wordt om de job naar behoren uit te voeren. De uitgebreide literatuur rond rol stress beperkt zich tot op heden tot het effect van rol stress op medewerkersgedrag en performantie. In dit doctoraat gaan we na wat de impact van rol stress is op klantenevaluaties. In de literatuur vinden we één enkele studie die de impact van jobvereisten op de perceptie van kwaliteit van dienstverlening bestudeert.

Zowel in de academische literatuur als bij praktijkmensen zien we dat *empowerment* een belangrijke rol toebedeeld wordt in personeelsmanagement. Empowerment is de mate waarin de werknemer controle heeft om de job uit te voeren naar eigen inzicht. Empowerment is noodzakelijk om op de specifieke behoeftes van de klant in te spelen zonder voor elke uitzondering op de formele procedures het akkoord van de supervisor te moeten bekomen.

Voor de zelf-ontwikkeling en zelf-ontplooiing van medewerkers is het belangrijk dat deze een gevoel van competentie hebben. De theorie van het sociale leren omschrijft *self-efficacy* als het geloof van de medewerker in zijn mogelijkheid

om job-gerelateerde taken uit te voeren. Het belang van self-efficacy ligt in de mogelijkheid om medewerkersprestatie te verbeteren. Self-efficacy groeit als medewerkers succesvol hun taken uitvoeren en versterkt het vertrouwen om de job goed uit te voeren. Daardoor gaan medewerkers grotere inspanning leveren en leren omgaan met job-gerelateerde moeilijkheden, zoals in de dienstverlenende sector bijvoorbeeld klanten met specifieke behoeftes.

In de verkoopmanagement literatuur en de organizationele gedragsliteratuur bestaat een rijke traditie van onderzoek naar de *klantgerichtheid* van de dienstverlenende medewerkers. Klantgerichtheid veronderstelt een grote mate van flexibiliteit van de werknemer om aan de noden van de klant tegemoet te komen. Klantgerichte medewerkers passen hun gedrag aan de eisen van de specifieke service encounter. Klanten evalueren de service encounter meer positief wanneer de dienstverleners in staat zijn om hun specifieke noden en vragen tegemoet te komen.

Veel ‘goeroes’ uit de Total Quality Management literatuur stellen dat het beheersen van de dienstverleningsprocessen leidt tot hogere tevredenheid van de dienstverlenende medewerkers, wat op zijn beurt resulteert in hogere niveaus van kwaliteit, productiviteit en organisatieprestatie. Links tussen jobtevredenheid en klanttevredenheid worden vaak vermeld in de literatuur rond kwaliteit van dienstverlening of de ‘service quality’ literatuur. De Tevredenheidspiegel, of ‘Satisfaction Mirror’ stelt dat tevredenheid van de dienstverleners als het ware overvloeit in klanttevredenheid. Theoretisch stelt men dat een grotere *jobsatisfactie* bij de dienstverlenende medewerkers wordt gereflecteerd in een hogere tevredenheid van de klanten.

Bij de klantenevaluaties onderscheiden we in dit doctoraat de tevredenheid met de wachtervaring, de perceptie van kwaliteit van dienstverlening en de algemene klanttevredenheid. In de literatuur rond wachten worden verschillende variabelen in verband met de *wachtervaring* onderscheiden. De wachtervaring wordt beïnvloed door situationele factoren zoals designkarakteristieken van de dienstverlening

(karakteristieken van het dienstverleningsproces) en de individuele karakteristieken van de klant. Deze situationele factoren variëren in de mate waarin de dienstverlener invloed kan uitoefenen op de wachtervaring en de mate waarin de klant zelf invloed heeft op de wachtsituatie. De situationele factoren beïnvloeden de tevredenheid van de klant met de wachtervaring.

Het SERVQUAL-model vormt de basis van de ‘*service quality*’ literatuur. In dit model onderscheidt men verschillende dimensies van kwaliteit van dienstverlening, namelijk de betrouwbaarheid van de dienstverlening, de responsiviteit, geborgenheid, empathie en tastbare aspecten van de dienstverlening.

Algemene klantentevredenheid staat centraal in dit doctoraat. In de marketingliteratuur wordt algemene klantentevredenheid als basis gezien voor positief klantengedrag in de vorm van loyaliteit om de dienstverlening aan te bevelen en loyaliteit onder de vorm van het opnieuw gebruik maken van de dienstverlening in de toekomst.

Onderzoeksopzet.

In dit doctoraat onderzoeken we de impact van medewerkersgerelateerde antecedenten van de wachtervaring en kwaliteit van dienstverlening in de specifieke omgeving van poliklinieken. De algemene onderzoeksopzet van dit doctoraat bestaat uit vier delen. In een eerste studie bekijken het *verschil tussen dienstverleners en klanten in hun evaluaties van de dienstverlening*. Er zijn drie onderzoeksvragen: (1) ‘Hoe onderscheiden klanten hun perceptie van kwaliteit van dienstverlening in verschillende dimensies?’, (2) ‘Zijn de percepties van deze ‘kwaliteitsdimensies’ verschillend tussen de dienstverlener en de klant?’ en (3) ‘Welk effect heeft de perceptie van de kwaliteit van dienstverlening op de algemene klantentevredenheid?’. Als dienstverlenende medewerkers en klanten een verschillende perceptie hebben van bepaalde dimensies van kwaliteit van dienstverlening is, in tegenstelling tot voorgaand onderzoek, het gebruik van reële klantengegevens omtrent evaluaties van dienstverlening noodzakelijk. De derde onderzoeksvraag geeft ons inzicht in de

impact van de perceptie van de verschillende kwaliteitsdimensies op de algemene klantentevredenheid.

In een tweede studie gaan we na wat de impact is van bepaalde situationele factoren van de wachtervaring op de perceptie van kwaliteit van dienstverlening en algemene klantentevredenheid. M.a.w. we onderzoeken de *relatie tussen de wachtervaring van de klanten en hun klantenevaluaties*. Theoretisch stelt de wachttheorie dat het voorzien van informatie over hoe lang en waarom de klant moet wachten een positieve invloed heeft op de evaluatie van de dienstverlening. Daarnaast stelt de wachttheorie dat wanneer men met een of andere activiteit bezig is tijdens het wachten en het wachten in groep klantenevaluaties van de dienstverlening positief beïnvloeden. Deze vier kenmerken van de wachtervaring worden getoetst op hun effect op de perceptie van de kwaliteit van de dienstverlening en de algemene klantentevredenheid.

In de derde studie testen we een *onderzoeksmodel dat de impact nagaat van medewerkersgedrag op algemene klantentevredenheid*. De relatie tussen jobsatisfactie en algemene klantentevredenheid staat in deze studie centraal. In een eerste stap gaan we na wat de antecedenten van jobsatisfactie zijn. De onderzochte organisatiekenmerken zijn job stress en empowerment. Self-efficacy wordt als medewerkersreactie op de organisatiekenmerken als tussenliggende variabele in de relatie tussen de organisatiekenmerken en jobsatisfactie gezien. In een tweede stap gaan we na wat dezelfde organisatiekenmerken als impact hebben op algemene klantentevredenheid. De klantgerichtheid van de dienstverlenende medewerker staat hier centraal. Uiteindelijk wordt de ‘Tevredenheidspiegel’ of ‘Satisfaction Mirror’ getest: heeft jobsatisfactie een invloed op algemene klantentevredenheid? Daarnaast gaan we of algemene klantentevredenheid een positieve impact heeft op de jobsatisfactie van de dienstverleners.

De laatste en vierde studie gaat dieper in op de *wisselwerking tussen medewerkersgedrag en de verschillende klantenevaluaties*, nl. klantentevredenheid met de wachtervaring, de perceptie van kwaliteit van dienstverlening en algemene

klantentevredenheid. We stellen hierbij de klantentevredenheid met de wachtervaring centraal. Op basis van de literatuur kunnen we diverse relaties tussen medewerkersgedrag en klantenevaluaties vaststellen, maar het bewijs ervan in de literatuur is eerder zwak. Daarom beperken we ons tot de sterkste assumpties op basis van literatuur die we dan ook als hypothesen formuleerden. We limiteren de medewerkersgerelateerde variabelen tot de impact van rol stress en empowerment op de klantenevaluaties van de dienstverlening.

Methodologie.

De focus van dit doctoraat ligt op de impact van organisatiekenmerken (jobstress en empowerment) en het gedrag van de dienstverlenende medewerkers (self-efficacy, klantgerichtheid en jobsatisfactie) op de wachtervaring en perceptie van kwaliteit van dienstverlening van de klant, die leiden tot klantentevredenheid of –ontevredenheid. Voor het meten van bovenstaande constructen bestaan algemeen aanvaarde en betrouwbare meetinstrumenten onder de vorm van gesloten Likert geschaalde vragenlijsten. Het gebruik van klanten en medewerkersgegevens is één van de sterktes van dit onderzoek omdat het verschillende standpunten biedt om de service encounter te bestuderen en we testen voor één van de typische methodologische beperkingen van het gebruik van vragenlijsten, nl. de ‘common method’ variantie. De datacollectie voor de vier studies gebeurde bij dienstverlenende medewerkers (dokters, verpleegkundigen en administratieve krachten) en klanten (patiënten) in 11 poliklinieken van hetzelfde ziekenhuis. Om inzicht te krijgen in alle relaties tussen de variabelen in de onderzoeksmodellen uit de derde en vierde studie, maakten we gebruik van ‘structural equation modelling’. Het gebruikte programma daarvoor, Lisrel 8.5, vermijdt kanskapitalisatie-fouten bij het gelijktijdig testen van alle relaties binnen het onderzoeksmodel.

Discussie van de resultaten

In tegenstelling tot voorgaand empirisch onderzoek vinden we een *verschil tussen percepties van dienstverleners en klanten wat betreft de kwaliteit van dienstverlening*. Daarnaast hebben de dienstverleners een vertekend beeld van de algemene klantentevredenheid. Zowel theoretisch als empirisch stelde men de percepties van kwaliteit van dienstverlening van dienstverleners en klanten gelijk. Voorgaand empirisch onderzoek baseerde zich voornamelijk op één van de actoren in de service encounter. Sommige auteurs bestudeerden de impact van medewerkersgedrag op klantenevaluaties gepercipieerd door de dienstverlenende medewerkers zelf. Andere auteurs bestudeerden de impact van medewerkers gepercipieerd door de klanten. De eerste studie van dit doctoraat benadrukt het belang van het meten van evaluaties van de dienstverlening bij de klanten zelf.

De bevindingen uit de tweede studie tonen de *invloed van situationele factoren van de wachtervaring op perceptie van kwaliteit van dienstverlening en algemene klantentevredenheid*. Van de situationele variabelen van de wachtervaring die we bestudeerden, is het voorzien van informatie waarom de klant moet wachten van belang voor de betrouwbaarheidsperceptie van de dienstverlening, de evaluatie van de tastbare aspecten van de dienstverlening en de algemene klantentevredenheid. Het blijkt dat klantentevredenheid met de wachtervaring moet overwogen worden in toekomstig onderzoek als een mogelijk antecedent van percepties van kwaliteit van dienstverlening en algemene klantentevredenheid. Het is daarom relevant om de wachtervaring binnen het kader van de relatie tussen dienstverlenende medewerker en klant te bestuderen. Dit wijst op nood aan een integrale benadering van de wachtliteratuur, 'service quality' en klantentevredenheidsliteratuur.

Organisatiekenmerken en de reacties van dienstverlenende medewerkers hebben duidelijk impact op de klantenevaluaties van de aangeboden dienstverlening. Uit de derde studie blijkt de *sterke negatieve invloed van jobsatisfactie op algemene klantentevredenheid*. We vinden geen empirische evidentie voor de 'Tevredenheidspiegel' of 'Satisfaction Mirror'. De positieve invloed van

jobsatisfactie op algemene klantentevredenheid is geen evidentie zoals theoretisch werd vooropgesteld. We bemerken wel een sterke positieve invloed van de algemene klantentevredenheid op de jobsatisfactie van de dienstverleners. Het ontbreken van empirische evidentie voor de ‘Tevredenheidspiegel’ of ‘Satisfaction Mirror’, leidt tot het kritisch nadenken over het feit dat organisatiekenmerken en medewerkersreacties als antecedenten van jobsatisfactie eventueel de eenduidige relatie tussen jobsatisfactie en algemene klantentevredenheid maskeerden in voorgaand empirisch onderzoek.

Het job demands-control model stelt dat hoge kwantitatieve jobvereisten en lage jobcontrole leiden tot o.a. lagere jobsatisfactie. Dit wordt bevestigd in de derde studie waar psychologische jobvereisten (kwantitatieve jobvereiste) vooral een sterke impact blijken te hebben op de jobsatisfactie. Uit de derde studie blijkt dat empowerment (dat geassocieerd is met een grotere mate van jobcontrole) een indirect positief effect heeft op jobsatisfactie via de self-efficacy. De directe link tussen het job demands-control model en klanterevaluaties blijft beperkt in de derde studie tot het direct en indirect effect van empowerment op algemene klantentevredenheid en in de vierde studie tot een directe positieve impact van empowerment op de tevredenheid met de wachtervaring, die op haar beurt resulteert in betere percepties van kwaliteit van dienstverlening en een hogere klantentevredenheid. Het positieve effect van empowerment op klantgerichtheid van dienstverlenende medewerkers in de derde studie blijkt een positieve invloed te hebben op de algemene tevredenheid.

Uit de derde studie blijkt dat kwalitatieve jobvereisten of rol stress wel een sterke negatieve impact hebben op algemene klantentevredenheid. Deze negatieve impact wordt in de vierde studie niet bevestigd als men de klantentevredenheid met de wachtervaring als antecedent van kwaliteit van dienstverlening en algemene klantentevredenheid ziet. Dit toont het *belang van klantentevredenheid met de wachtervaring als antecedent van percepties van kwaliteit van dienstverlening en algemene klantentevredenheid*. Daaruit blijkt dat de integratie van de wachtliteratuur in de klantengedrag literatuur noodzakelijk is.

Praktische implicaties

Enkele praktische implicaties voor het management van dienstverlenende organisaties kunnen op basis van de empirische resultaten van dit doctoraat gegeven worden. Ten eerste is het voor de organisatie van belang om de kwaliteit van dienstverlening en klantentevredenheid te meten bij de klant zelf en niet via percepties van de dienstverlenende medewerkers. Ten tweede, de tevredenheid van de klant met de wachtervaring blijkt een belangrijk aspect voor de perceptie van kwaliteit van dienstverlening en algemene klantentevredenheid. Door het voorzien van informatie aan de klant waarom hij moet wachten kan het management van dienstverlenende organisaties de perceptie van de tastbare aspecten en de betrouwbaarheid en de algemene klantentevredenheid verhogen. Ten derde, door dienstverlenende medewerkers controle te geven over het uitvoeren van hun job (empowerment), worden zowel de jobsatisfactie van deze positief beïnvloed als de klantenevaluaties van de dienstverlening. Ten vierde, rol stress moet gereduceerd worden in functie van een hogere jobsatisfactie en betere algemene klantentevredenheid.

Beperkingen en verder onderzoek

De empirische resultaten van dit doctoraat gebaseerd op data van 11 poliklinieken zijn beperkt naar generaliseerbaarheid naar het totaal van dienstverlenende organisaties. De specifieke context van een dienstverlening die ten behoeve staat van de gezondheid van de mens beperkt deze generaliseerbaarheid: de patiënt wenst immers niet alleen een dienstverleningsproces dat rimpelloos verloopt maar als eindresultaat een correcte medische diagnose of procedure of conformiteit naar de professionele specificaties.

Cross-sectioneel onderzoekdesigns kunnen de geobserveerde correlaties tussen antecedenten en uitkomsten buiten proportie uitvergroten. Longitudinaal onderzoek zou meer evidentie geven over de causale relaties tussen organisatiekenmerken en medewerkersgerelateerd gedrag en klantentevredenheid.

Besluit

We kunnen besluiten dat organisatiekenmerken en medewerkersgedrag een impact hebben op klantenevaluaties. De tevredenheid van de dienstverlenende medewerkers heeft niet noodzakelijk een positieve invloed op de algemene klantentevredenheid. In tegenstelling tot voorgaand onderzoek vinden we dat dienstverlenende medewerkers en klanten verschillende perceptie van kwaliteit van dienstverlening hebben en dat de dienstverlener een vertekend beeld heeft van de klantentevredenheid. Bij evaluaties van de dienstverlening bij klanten zien we een belangrijke impact van de tevredenheid met de wachtervaring op de perceptie van kwaliteit van dienstverlening en algemene klantentevredenheid. Het voorzien van informatie over de oorzaken van de wachttijd heeft een positief effect op de perceptie van kwaliteit van dienstverlening en klantentevredenheid.

ENGLISH SUMMARY

EMPLOYEE-RELATED ANTECEDENTS OF THE WAITING EXPERIENCE AND SERVICE QUALITY IN OUTPATIENT CLINICS.

The general purpose of this dissertation is to examine the impact of customer-contact service employee behavior (employee-related antecedents) and customer waiting experience on customer service evaluations in outpatient clinics. More specifically, we attempt to (1) provide evidence for the difference between service employees' and consumers' service evaluations, (2) extend the limited research on the impact of customer waiting experience on customer service evaluations, (3) better understand the specific influence of employee-related antecedents on overall customer satisfaction and (4) learn more about the interference of wait satisfaction in the relation between service employee behavior and overall customer satisfaction.

Our empirical results underline the importance of service-employee behavior for consumer evaluations of the delivered service. In a first study, results indicate that service employees and consumers have different perceptions of the quality of the delivered service. The reliability of the service has the greatest effect on overall customer satisfaction. In the second study, we investigated factors of the waiting experience. Explanation of the reasons why consumers have to wait has the strongest impact on the perceptions of reliability of the service, tangible aspects associated with the service and overall customer satisfaction. In contrast with previous research, the results of the third study indicate that job satisfaction of service employees has a negative impact on overall customer satisfaction, although overall customer satisfaction positively influences job satisfaction of the service employees. In the fourth study, our empirical results support the importance of the satisfaction with the pre-process waiting experience for customers' perception of service quality and overall customer satisfaction. More empowered service employees positively influence wait satisfaction and overall customer satisfaction. A high consumer perception of the reliability of the delivered service is crucial for positive service evaluations.

Chapter 1

Introduction

INTRODUCTION

1. Objective of the dissertation.

The general purpose of this dissertation is to examine the impact of customer-contact service employee behavior and customer waiting experience on customer evaluations of the delivered service in outpatient clinics.

Due to the specific nature of services (in services, there is a direct interaction between the customer and customer-contact service employees), customer-contact service employee behavior impacts directly customer evaluations of the delivered service.

Since waiting is commonly the first interaction between the customer and the service (Davis and Heineke, 1998), and the length of the waiting time is a consistent precedent for customer dissatisfaction (Bitner, Booms, and Tetreault, 1990; Hart, 1995), we study the impact of customer waiting experience on customer service evaluations.

Figure 1 displays a basic outline of this dissertation.

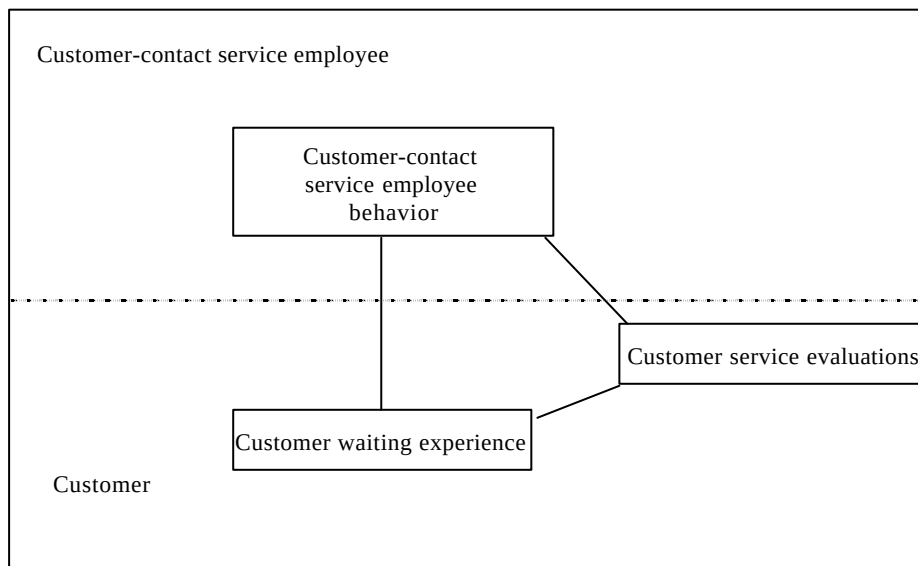


Figure 1.Basic model of the dissertation.

2. Motivation of the study.

2.1 Theoretical background

2.1.1. Service encounter

Services are characterized by the interaction between service employees and customers, or the so-called ‘service encounter’ or ‘moment of truth’.

The service encounter can be depicted as a triangle formed by the interacting interests of the customer, service organization, and customer-contact service employees (see fig. 2, Bateson, 1985; Wetzels, 1998). Each participant in the service encounter attempts to exert control over the encounter.

The managers of *service organizations* have an interest in delivering service as efficiently as possible to protect their margins and remain competitive. Non-profit service organizations might substitute effectiveness for efficiency, but they still must operate under the limits imposed by a budget. To control service delivery, managers tend to impose rules and procedures on the customer-contact service employees to limit their autonomy and discretion when serving the customer. These rules also limit the extent of service provided for the customer and the resulting lack of customization that might result in a dissatisfied customer.

The interaction between customer-contact service employee and customer has the element of perceived control by both parties. The *customer-contact employees* want to control the behavior of the customer to make their own work more manageable and less stressful: at the same time, the *customer* is attempting to gain control of the service encounter to derive the most benefit from it. It should be noted, however, that customer-contact employees generally truly care about the customer and are willing to exert the greatest possible effort to satisfy the customer’s needs (Schneider, 1980; Schneider and Bowen, 1985).

A satisfactory and effective service encounter should balance the need for control by all three participants. The organization’s need for efficiency to remain economically viable can be satisfied when the customer-contact employees are trained properly and the customer’s expectations and role in the delivery process are communicated effectively.

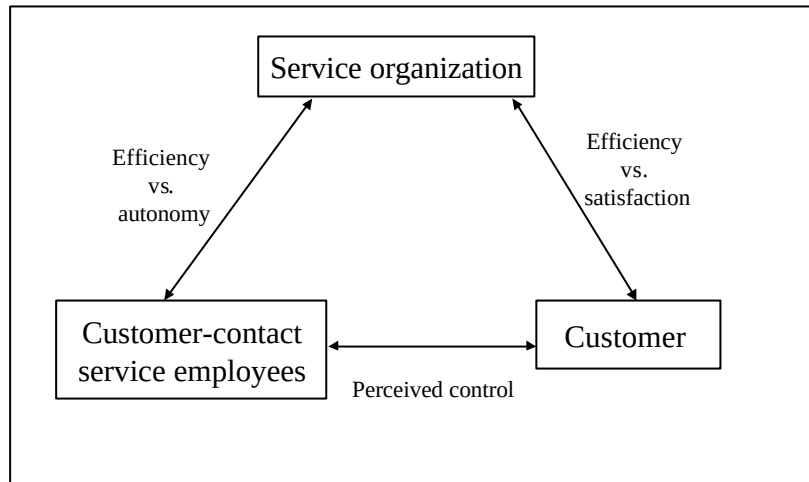


Figure 2. The service encounter triad (Bateson, 1985)

2.1.2. Customer service evaluations

The service encounter or ‘moment of truth’ is a moment in time when the customer is evaluating the service and forming an opinion of its quality (Normann, 1984). Customers experience many service encounters with different service providers and each moment of truth is an opportunity to influence the customer’s perception of the service quality.

Service encounters can be viewed as a sequence of events that unfolds over time (Dubé, Schmitt, and Leclerc, 1991). Dubé-Rioux, Schmitt and Leclerc (1989) divide the service encounter into pre-consumption, core service delivery and post-consumption phase. Pre-consumption incorporates waiting for the core service to be performed (Liljander and Mattson, 2002).

In terms of customer service evaluations, we differentiate between pre-and post-consumption evaluations: pre-consumption evaluations incorporate wait satisfaction, post-consumption evaluations consist of the customers’ overall responses to the service encounter and encompass customers’ perceptions of service quality and overall customer satisfaction.

A. Service quality

Ever since Parasuraman, Zeithaml and Berry (1985) developed their conceptual model of service quality, service quality has become a major topic of interest in the field of service marketing. In order to study possible outcomes of service quality, research is directed to the relationship between service quality and overall customer satisfaction and customer loyalty behavior (e.g. Bolton, 1998; Mittal and Kamkura, 2001).

Service quality can be defined as an overall judgement similar to “attitude towards the service” (Parasuraman, Zeithaml, and Berry, 1988) and generally accepted as antecedent of overall customer satisfaction (Zeithaml and Bitner, 2003). Service quality is associated with an attitude representing a long-term, overall evaluation, whereas *overall customer satisfaction* represents a short-term, transaction-specific judgement of the whole service process (Cronin and Taylor, 1994).

In the service quality literature, there are two distinct definitions of quality: *technical quality and process quality* (Gronroos, 1990). Technical quality is essentially ‘what’ the customer receives from the service provider. Process quality is defined as ‘how’ service is delivered.

The *service quality* research originated with the conceptual model of service quality (Gap Model, see fig. 3) as conceived by Parasuraman et al. (1985). The Gap Model consists of five gaps (Parasuraman et al., 1985) and incorporates the interacting interests of customer, service organization and customer-contact employees as depicted in the service encounter triad.

The first gap is that between management perceptions of the customer’s expectations and the expected service by the customer. If a service organization mainly focuses on operations or transactions rather than on customer relationships, or if it is absorbed with gaining new customers over the retention of current customers, Gap 1 may become larger (Zeithaml and Bitner, 2003). In order to close Gap 1, an organization will need to develop an accurate awareness of customer expectations of the service quality (e.g. through marketing research).

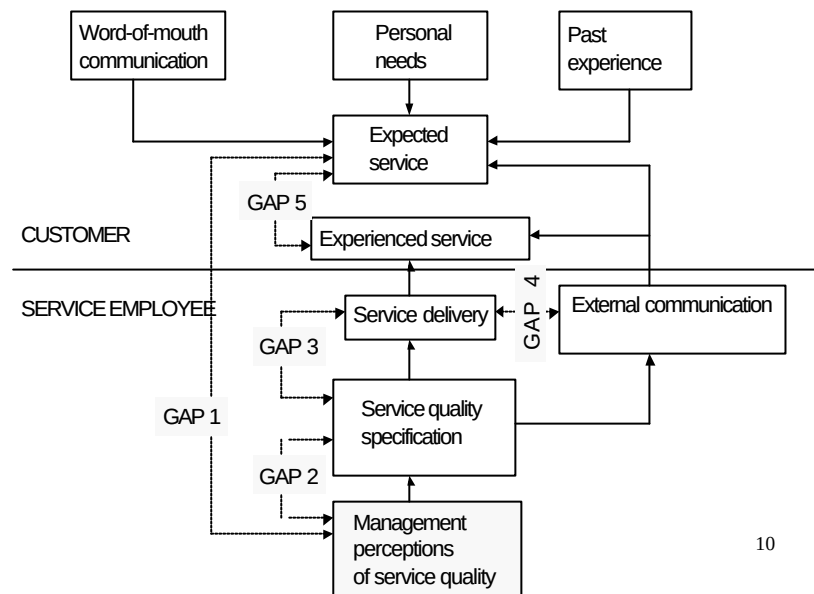


Figure 3. Service quality model or Gap model (Parasuraman et al., 1985).

Without a clear understanding of customer expectations, three other gaps in the model (i.e. Gap 2, 3, and 4) cannot be adequately closed. Gap 2 represents the gap between the perceptions of management of customer expectations and the translation of those perceptions into specifications about the service quality. Management will be able to close the gap between the customer expectations and service quality specifications by implementing quality procedures, such as ISO 9002.

Gap 3 is the gap between the service quality specifications and the actual service delivery. Some key contributing factors for translation of service quality specifications are issues concerning customer-contact service employee behavior, such as the degree of perceived control of the service employee (empowerment), the absence of role conflict and role ambiguity, and service employee-job fit which

results in self-efficacy (Frost and Kumar, 2000). Gap 4 represents the gap between the service delivery and the external communications to customers.

All of the above mentioned gaps (Gaps 1-4), in turn, serve as the mechanism by which the customer's expectations of the service quality are confirmed or disconfirmed in a service setting (Gap 5) with the perceived service quality by the customers.

In 1988, Parasuraman et al. developed SERVQUAL, a multiple-item scale to measure service quality in five service quality dimensions that are sufficiently generic to cover a variety of services in different sectors. At first, service quality was measured as the difference between *expectations and perceptions*. In its original form, SERVQUAL contains 22 pairs of Likert-type items. Twenty-two items measure respondents' expected levels of service for a particular service industry, while the other 22 matching items measure the perceived service level provided by a particular organization within that service industry. Service quality was measured by the score difference between the perceived and the expected level of service provided. A major shortcoming of the SERVQUAL procedure, as presented by Parasuraman et al., concerned the incorporation of expectations into a measurement of service quality (Cronin and Taylor, 1992; Cronin and Taylor, 1994; Parasuraman, Zeithaml, and Berry, 1994a; Parasuraman, Zeithaml and Berry, 1994b; Teas, 1993). There appeared to be serious problems with the value of the expectations battery as proposed, namely, the ability to administer it, and the factor analysis of the difference between perceptions and expectations. Some alternative procedures for overcoming these problems have been suggested (Carman, 1990). Patterson and Johnson (1993) state that service quality is not directly and indirectly influenced by expectations. Perception by itself seems to be a stronger predictor of the service quality concept (Cronin and Taylor, 1992; Teas, 1993; Churchill and Suprenant, 1982; Oliver, 1993; Tse and Wilton, 1988; Woodruff, Cadotte, and Jenkins, 1983). Parasuraman (1995) argued that the perceptions-only approach to measuring quality is even more acceptable from a predictive validity point of view, as it explains considerable variance in overall service quality ratings. Moreover, it is regarded as impractical to ask participants to complete two surveys.

Initially, Parasuraman et al. (1985) defined 10 *service quality dimensions*, which they reduced in subsequent studies to five: reliability (the ability to perform the promised service reliably and accurately), assurance (the knowledge and courtesy of employees and their ability to inspire trust and confidence in customers), tangibles (the physical facilities, the equipment and the appearance of personnel), empathy (the extent to which caring, individualized attention was provided to customers) and responsiveness (willingness to help customers and provide prompt service) (Parasuraman et al., 1988).

B. Overall customer satisfaction

Overall customer satisfaction is a judgement on whether the service provides a pleasant level of consumption-related fulfillment, and is an evaluation of the entire consumption experience (Oliver, 1997).

C. Service quality and overall customer satisfaction

Service quality and satisfaction have been shown not to be the same construct (Bitner and Hubbert, 1994; de Ruyter, Bloemer, and Peeters, 1997; Johnston, 1995). Service quality is associated with an attitude representing a long-term, overall evaluation, whereas satisfaction represents a more short-term, transaction-specific judgment (Cronin and Taylor, 1994). Several studies (Oliver, 1993; Patterson and Johnson, 1993; Rust and Oliver, 1994; Taylor and Baker, 1994) have come to the conclusion that customers must have experienced a particular service in order to achieve satisfaction, while the perceived service quality is not necessarily the result of any one service encounter. Satisfaction refers to the outcome of the overall service encounter, whereas service quality is the customer's overall impression of the relative inferiority/superiority of the organization and its services (Bitner and Hubbert, 1994; Johnston, 1995).

If service satisfaction and quality are conceptually different constructs, the obvious question then will be how these constructs are related. There exists both theoretical and empirical evidence for service quality resulting in satisfaction, rather than the

other way around (Dabholkar, Shepperd, and Thorpe, 2000; Gotlieb, Grewal, and Brown, 1994; Oliver, 1997).

‘The zone of tolerance’ is a range of service performance that a customer considers satisfactory (Berry and Parasuraman, 1991). The importance of the zone of tolerance is that customers may accept variation within a range of performance and any increase in performance within this area will only have a marginal effect on perceptions (Strandvik, 1994). Only when performance moves outside this range will it have any real effect on perceived service quality (Johnston, 1995; Liljander and Strandvik, 1993). When studying the link between service quality dimensions in the zone of tolerance, Johnston (1995) finds that some service quality dimensions tend to be primarily a source of dissatisfaction (dissatisfiers) and others that tend to be primarily a source of satisfaction (satisfiers). Satisfiers are features where unusual performance elicited strong feelings of satisfaction leading to complementing behavior (Johnston, 1995) and have the potential to further satisfaction beyond the basic function of the product (Zeithaml and Bitner, 2003) but typical performance or absence of performance did not necessarily cause negative feelings. Dissatisfiers are present when the performance or absence of the desired feature led to dissatisfaction (Zeithaml and Bitner, 2003).

D. Wait satisfaction

Previous literature reveals that pre-consumption affective responses might guide customers’ post-consumption evaluations (Mattila and Wirtz, 2002). The waiting literature has revealed that pre-process waiting generates more intense negative affective responses than in-process waiting (Davis and Maggard, 1990; Dubé-Rioux et al., 1989, Dubé et al., 1991). Maister (1985) argues that waiting experiences in a service organization significantly affect the overall perceptions of the quality of services provided. The extent to which customer satisfaction with pre-process waiting influences customers’ service evaluations is unclear. Studies of customers’ reactions to service waits have mainly focused on the strength of dissatisfaction that longer waits cause (Houston, Bettencourt, and Wenger, 1998; Taylor, 1994) and the impact of waiting on customers’ service quality perceptions (Taylor, 1995). Pruyn and

Smidts' model (1992) suggests that overall customer satisfaction with the service is influenced by satisfaction with the wait.

E. Customer service evaluations in health care

The service quality construct in health care can be divided into clinical and process quality. Clinical quality is the technical quality delivered and results from medical procedures. Process quality is the result of the service (non-technical) delivery process engaging during and outside the medical procedures. Clinical quality is determined by medical outcomes and 'what' is delivered while process quality results from patients' perception of 'how' the service was created and delivered (Marley, Collier, and Goldstein, 2004).

SERVQUAL has been tested in health care settings, and the findings have been mixed (Bowers, Swan and Koehler, 1994; Butler, Oswald, and Turner, 1996; Jun, Peterson, and Zsidisin, 1998; Lam, 1997; Parasuraman et al., 1994a, 1994b; Van Looy, et al., 1998). In health care research, there is no agreement on the number of dimensions found, with the range varying from one (Lam, 1997) to nine (Carman, 1990).

Cronin and Taylor (1994) state that customers of health services are not able to distinguish service quality from satisfaction when they respond to patient satisfaction or service quality surveys. Patient satisfaction may be influenced by some factors beyond those of service quality (Vandamme and Leunis, 1993), although Woodside, Frey and Daly (1989) concluded that perceptions of service quality are positively associated with overall patient satisfaction and Vandamme and Leunis (1993) found evidence that service quality and patient satisfaction are reflected by the same dimensions.

2.1.3. Waiting experience

Interacting interests of the customer and the service organization in the service encounter can be reflected in customers waiting for services. The problem of waiting for services can be attributed to decisions in capacity management. In this respect, the wait management literature studies the balance between supply and demand, or the

trade-off between more service employees with higher costs and less waiting time for the customers on the one hand, and less service employees with lower costs and longer waiting times on the other hand.

As Davis and Heineke (1998) have pointed out, waiting is the first interaction between the customer and the service. Other authors (Bitner et al., 1990; Hart, 1995) have shown that the length of the waiting time is a consistent precedent for customer dissatisfaction. Waiting often becomes a negative experience because of the psychological and economical costs involved (Kumar, Kalwani, and Dada, 1997), and because delays are worse when customers have high expectations about the service quality (McDougall and Levesque, 1999). The amount of time that customers spend waiting, and their discomfort in a waiting long time to be served, can significantly influence their level of satisfaction with (Ramirez Valdivia and Crowe, 1997), and evaluation of the service (Taylor, 1994).

The wait literature reveals different variables of the waiting experience that can influence customer evaluations of the delivered service. Several studies have indicated that a variety of factors, such as service design characteristics and individual characteristics of the customer (e.g. Durrande-Moreau, 1999; Jones and Peppiatt, 1996), can have a profound effect on the waiting experience. These factors vary in the degree of control the service provider exerts and the degree of control by the customer. These factors can influence the customer's satisfaction with the waiting experience and ultimately impact the perception of service quality (Taylor, 1995) and overall customer satisfaction (Pruyn and Smidts, 1998).

Maister (1985) formulated eight propositions, better known as the 'laws of the psychology of waiting'. He states theoretically that giving information about the length and reason of the waiting time has a positive impact on the customer evaluations of the service. Waiting in group and being occupied during waiting should also have a positive affect on the service evaluations. Pre-process waiting times generate more negative customer service evaluations than in-process waiting times. When the perceived value of the service is high, customers tend to have more positive service evaluations. Customers have more positive service evaluations when they perceive the waiting time fair versus unfair and calm versus anxious.

2.1.4. Service employee behavior

When studying the effect of the service encounter on customer service evaluations, one can study different aspects of customer-contact service employee behavior, which affect customer evaluations of the service.

Customer-contact service employees want to control the behavior of the customer in the service encounter to make their own work more manageable and less stressful. We found a lack in research about the impact of *job stress* on customer service evaluations. Job stress refers to an employee's perception of imbalance between the job demands made and the available resources, such as empowerment, to meet those demands, which can lead to a feeling of doubt about the ability to cope. On a theoretical level, one can distinguish between quantitative and qualitative job demands (Janssens, 2001). *Quantitative job demands* are those demands that make the service job psychologically and physically exhaustive. This type of job demands is part of the 'Job demands-control model' as proposed by Karasek in 1979. His model proposes that when job demands are high, and the degree of control over the job is low, job satisfaction and physical and mental health will be low as a result.

The *qualitative job demands* refer to being faced with role stress. In this context, role theory distinguishes between role conflict and role ambiguity (Rizzo, House, and Lirtzman, 1970). Role conflict emerges when service employees are confronted with the conflicting demands of the organization, the supervisor, and the customer. Role ambiguity exists when there is a lack of information on how to perform the job in an adequate manner. The extensive literature about role stress limits itself to the impact of role stress on employee performance. In the existing literature, we found only one study that examines the impact of job demands on the perceptions of service quality (i.e. Dorman and Kaiser, 2002).

Each participant in the service encounter attempts to exert control over the encounter, leading to the need for flexibility and the empowerment of customer-contact service employees (Fitzsimmons and Fitzsimmons, 2000). In recent years, service organizations have rushed to adopt an *empowerment* approach to service delivery in which employees are faced with customers free of rulebooks, and

encouraged to do whatever is necessary to satisfy them (Bowen and Lawler, 1992). Empowerment refers to the degree to which employees are allowed to make decisions about the way they accomplish their job tasks. Employees generally expect their work to allow them to use their knowledge and skills effectively, and to produce something that they can be proud of, and have social relevance (Bruce and Blackburn, 1992). In this respect, frontline employees desire tools and authority as a frontline employee in order to serve the customer (Zeithaml and Bitner, 2003).

When service organizations empower their service employees, it is important for service employees to have a feeling of competence to fulfill their job. Bandura's (1977) social learning theory defines *self-efficacy* as the belief of the service employee in his or her ability to perform the job tasks. The importance of self-efficacy lies with the ability to increase performance of service employees. Self-efficacy grows if service employees perform their job-related tasks successfully, it also increases trust to perform the job in an adequate manner. Service employees therefore enhance their efforts and learn to handle job-related difficulties, which arise frequently in the service sector (i.e. for customers with specific needs for which there is no formal procedure available).

By imposing rules and procedures on the customer-contact service employee to limit their autonomy and discretion when serving the customer, the service organization limits the extent of service provided for the customer and the resulting lack of customization that might result in a dissatisfied customer. In the literature on sales management and organization theory, there exists a strong tradition of research directed towards the *customer orientation* of the service employee. Customer orientation is a behavior in which customers are adapting to the needs of the customer and suggests a high degree of flexibility of the service employee to meet the needs of the customer. Service employees need to adjust their behavior to the specific service encounter. Customer orientation of service employees is a potential source of competitive advantage for the firm, and will, in many services, lead to favorable evaluations of the service quality by customers (Lewis and Entwistle, 1990).

In the service profit chain, Heskett, Loveman, Sasser, Schlesinger (1994) and Heskett, Sasser, Schlesinger (1997) propose that satisfied employees create customer

satisfaction because they enjoy the quality of working life provided by the service organization. This is because services are intangible social events where employee attitudes become a prime source of cues available to customers seeking to evaluate a service (Mills, 1986; Moshavi and Terborg, 2002; Schneider and Bowen, 1995). The 'Satisfaction Mirror' (Heskett et al., 1997) argues that *job satisfaction* spills over in customer satisfaction. The effects of a positive service encounter are shown in research that has suggested positive relationships between job satisfaction and customer service evaluations (Hallowell, Schlesinger, and Zornitsky, 1996; Heskett et al., 1994, 1997; Moshavi and Terborg, 2002; Rust, Stewart, and Miller, 1996; Schneider, 1980; Schneider and Bowen, 1985; Schneider and Bowen, 1995, Schneider, Brief, and Guzzo, 1996; Silvestro and Cross, 2000; Zeithaml, Berry, and Parasuraman, 1996).

2.2. Practical background

In their overview of well-being and occupational health in the 21st century workplace, Sparks, Faragher, and Cooper (2001) stressed the importance of current concerns of organizations and the workforce regarding increased job insecurity, flexibility in employees' working hours, employee perceptions of decreased control at work and managerial pressure. They argue that there is an increased pressure on managers to keep up the pace and manage service employees in a context of rapid change.

The health care sector in particular has been proven to be extremely vulnerable to changes. In their summary on *changes in the health care environment*, De Jonge, Mulder, and Nijhuis (1999) argue that the rapidly expanding medical technology and increasing job complexity can result in a reduced feeling of self-efficacy with health care employees. Financial restrictions in the health care sector limit the available resources for the health care employees to perform their jobs. The implementation of new care delivery systems has important consequences for the manner of working in health care. Furthermore, the fact that people have increasingly longer lifespans has resulted in a rise of the number of chronic patients. In addition to old age, several new diseases, such as new viral diseases (Aids) and psychological diseases (mental fatigue), are posing new challenges for the health care professionals. Health care organizations further experience increasing pressure, both from a rising customer demand (John, Gabbot, and Hogg, 1998) to become more customer-oriented and from the governments to be more cost-oriented.

Although health care systems may be different on an ideological level, they face *similar problems* of containing costs, while at the same time delivering effective services in an area of ever-increasing customer demand. In response, countries such as UK, where health care has traditionally been based upon planning and regulation, are now moving towards a more competitive model (John et al., 1998).

Health care professionals are a very suitable group of workers to test the impact of service employee behavior on customers' behavior because there is a variety of health care sectors and different specialties. Health care professionals are a relatively heterogeneous group as far as exposure to work pressure is concerned. The positive

effect of the heterogeneity added by fact that the health care sector shows little variance in the social class of its employees. The small variance regarding social class in health care work results in the fact that socio-economic status will not act as a confounder (De Jonge, et al., 1999; Ganster and Fusilier, 1989; Fox, Dwyer, and Ganster, 1993; Sheffield, Dobbie and Carroll, 1994). Employees who work in health related professions generally suffer more than other workers, and are by the nature of their work particularly vulnerable to job-induced stress and all its detrimental effects on the service delivery and quality of care (Muncer, Taylor, Green, and McManus, 2001).

Outpatient clinics in particular are confronted with chronic problems, such as short service encounter and long waiting times. Since the competitive situation of outpatient clinics is expected to be a major stressor that imposes strong adaptive demands on employees, an increase in strain can be foreseen at least as a short-term effect. We therefore have chosen outpatient clinics as our sampling frame.

Interviews with different heads of outpatient clinics revealed problems with the organization of outpatient clinics in terms of high waiting times for the patients. Outpatient clinics find themselves positioned between the demands of the hospital and the patient. The major concerns of a hospital revolve around the cost of providing the service and the impact of service quality on its business, while from the customers' perspective, the major concerns involve the quality of the service provided, the length of time spent waiting and the cost associated with this time.

3. Conceptual model and objectives

3.1. Conceptual model

Based on previous literature research (for a more detailed literature study, see following chapters), we have developed a conceptual model (see fig. 4) to study the impact of customer-contact service employee behavior (employee-related antecedents) and customer waiting experience on customer service evaluations.

3.1.1. Customer-contact service employee behavior or employee-related antecedents

The ‘Satisfaction Mirror’ (Heskett et al., 1997) argues that *job satisfaction* spills over in customer satisfaction. Previous research revealed that job demands and empowerment can be considered as antecedents of job satisfaction (Beehr, Glaser, Canali, and Wallwey, 2001; de Jonge et al., 1999; Dollard, Winefield, Winefield, and de Jonge, 2000; Dwyer and Ganster, 1991; Furnham, 1992; Noblet, Rodwell, and McWilliams, 2001; Nygaard and Dahlstrom, 2002; Peccei and Rosenthal, 2001; Sargent and Terry, 1998; Siguaw, Brown and Widing, 1994; Williams, Konrad, Scheckler, Pathman, Linzer, McMurray, Gerrity, and Swartz, 2001). Self-efficacy is a mediator of the relationship between job demands and empowerment and job satisfaction (McDonnald and Siegall, 1992; Locke and Latham, 1990; Schwoerer and May, 1996), customer orientation is a mediator of the relation between job demands and empowerment and customer service evaluations and job satisfaction (Hartline and Ferrell, 1996; Bitner, 1990, Bitner et al., 1994).

3.1.2. Waiting experience

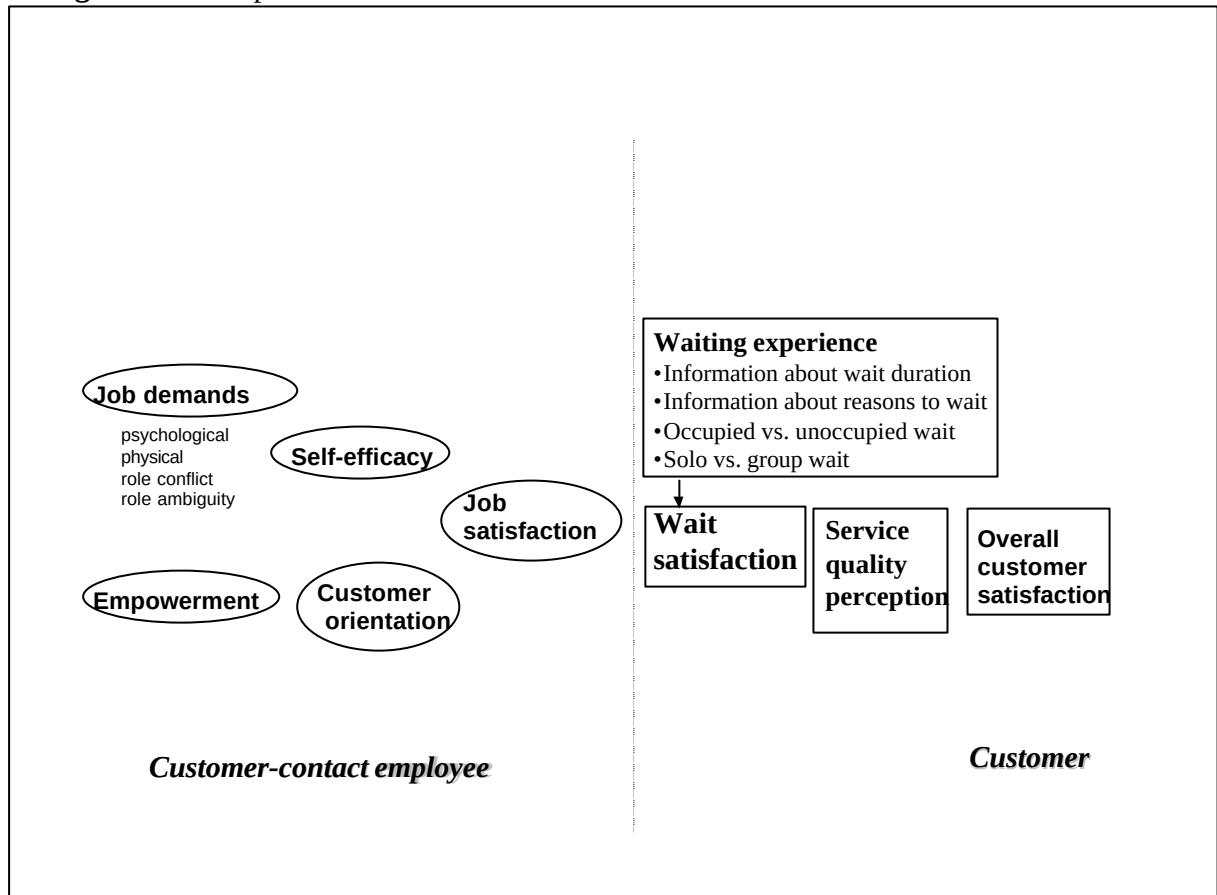
The pre-consumption phase of the service encompasses waiting for the service to be delivered. We investigate the impact of some variables of the waiting experience help to explain any variation that might occur in customer service evaluations. The variables investigated are related to four of Maister’s (1985) eight propositions on the psychology of waiting: uncertain vs. certain duration of waiting, unexplained vs. explained waiting, solo vs. group waiting, and unoccupied vs. occupied waiting. Our empirical study in outpatient clinics is limited to pre-process waiting because previous research has revealed that pre-and post-process waiting generates more

intense negative affective responses than in-process waiting (Davis and Maggard, 1990; Dubé-Rioux et al., 1989; Dubé et al., 1991). Particular waiting situations vary in the control that the service provider exercises over the service design and the control that individuals exercise over their own characteristics (e.g., Beqiri and Tadisina, 2002; Durrande-Moreau, 1999; Jones and Peppiatt, 1996). Therefore, we did not include three other variables related to Maister's propositions because they are less under control of the service provider: perceived value of the service, fair versus unfair wait and anxious versus calm waiting. Perceived value of the service is primarily customer-related. Individual characteristics of the customer as e.g. personality and mood have a certain influence on anxious versus calm waiting and the perception of fair versus unfair waiting. The service provider is less able to control these aspects of the perceived waiting environment than information about the wait duration, reasons to wait, occupation during waiting and group vs. solo waiting.

3.1.3. Customer service evaluations

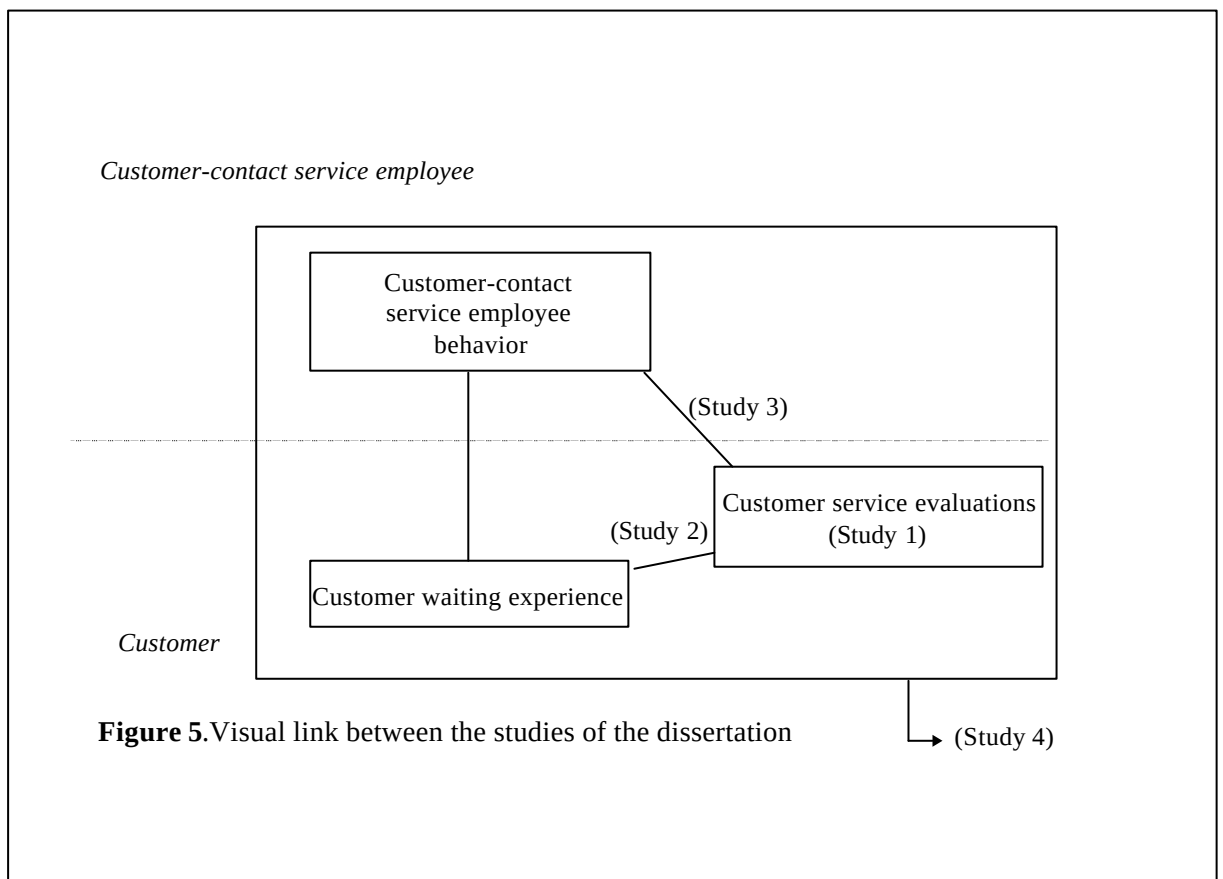
The customer service evaluations are expressed as wait satisfaction, perceptions of service quality, and overall customer satisfaction. The proposed sequence of the customer service evaluations is based on the sequence of the service encounter. Satisfaction with the waiting experience is a pre-consumption service evaluation, while service quality perceptions and overall customer satisfaction can be treated as post-consumption evaluations and where the literature suggests that service quality is an antecedent of customer satisfaction (Dabholkar et al., 2000; Gotlieb et al., 1994; Oliver, 1997).

Figure 4. Conceptual model



3.2. Logical flow of the studies of this dissertation

The general purpose of this dissertation is to examine the impact of customer-contact service employee behavior (employee-related antecedents) and customer waiting experience on customer service evaluations in outpatient clinics. The conceptual model as developed in figure 4, serves as a starting point for different studies. Parsimony restrictions advise to test of models, which are less complex than the conceptual model. Based on the basic model offered in figure 1, we provide a visual link between the four studies of this dissertation in figure 5.



3.2.1. Study 1 (*chapter 2*)

Study 1 (*chapter 2*) studies the relation between the two post-consumption customer service evaluations: Patients' and personnel's perceptions of service quality and patient satisfaction in nuclear medicine.

In this first study, we look at the differences in service evaluations of customers and service employees, and more specifically to the different perceptions of service quality of patients and personnel in nuclear medicine (*chapter 2*, see fig. 6). After outlining the dimensions of the service quality of the environment of a specific outpatient clinic, a comparison between the service quality perceptions of customers and service employees follows. We need this information to decide if customer and service employee data concerning service quality are interchangeable as suggested by e.g. O' Connor, Tringh and Shewchuk (2000). If this is not the case, the use of employee data instead of customer data is not applicable if we want to test the effect of employee-related antecedents on customer service evaluations in outpatient clinics.

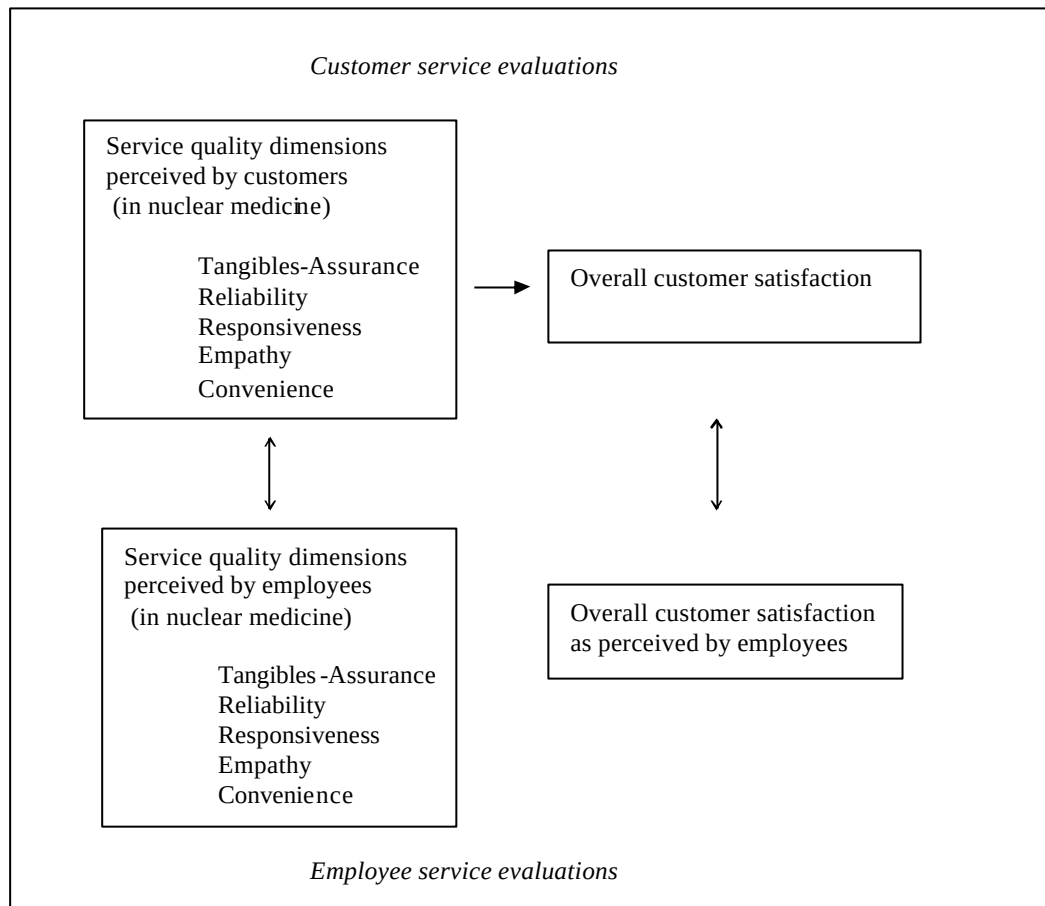


Figure 6. Studied concepts of the conceptual model in study 1 (*chapter 2*).

3.2.2. Chapter 3

The editorial 'Waiting for Godot: waiting in nuclear medicine' (*chapter 3*) serves as an introduction for *chapter 4*. *Chapter 3* introduces the topic of waiting in outpatient clinics and elaborates on the impact of the waiting experience on customers in the specific environment of a nuclear medicine department.

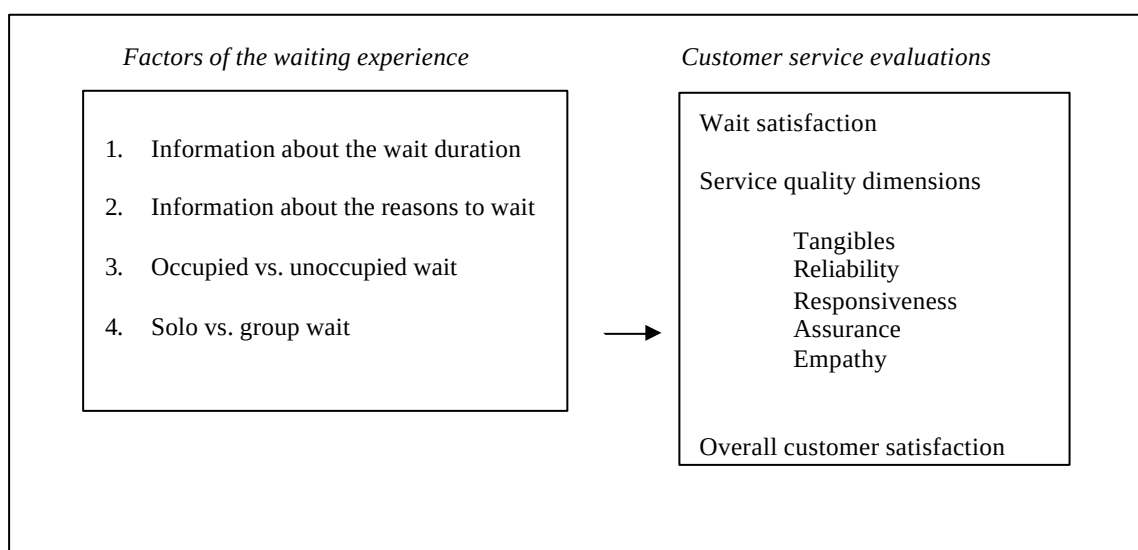
3.2.3. Study 2 (*chapter 4*)

Study 2 (*chapter 4*) studies the link between customer waiting experience and customer service evaluations: The waiting experience and customer service evaluations in outpatient clinics (*chapter 4*, see *fig. 7*).

This empirical study investigated the impact of some variables of the waiting experience help to explain any variation that might occur in consumer service

evaluations. The variables investigated are related to four of Maister's (1985) eight propositions on the psychology of waiting: uncertain vs. certain duration of waiting, unexplained vs. explained waiting, solo vs. group waiting, and unoccupied vs. occupied waiting. Our empirical study in outpatient clinics is limited to pre-process waiting because previous research has revealed that pre-and post-process waiting generates more intense negative affective responses than in-process waiting (Davis and Maggard, 1990; Dubé-Rioux et al., 1989; Dubé et al., 1991). Particular waiting situations vary in the control that the service provider exercises over the service design and the control that individuals exercise over their own characteristics (e.g., Beqiri and Tadisina, 2002; Durrande-Moreau, 1999; Jones and Peppiatt, 1996). Therefore, we did not include three other variables related to Maister's propositions because they are less under control of the service provider: perceived value of the service, fair versus unfair wait and anxious versus calm waiting. Perceived value of the service is primarily customer-related. Individual characteristics of the consumer as e.g. personality and mood have a certain influence on anxious versus calm waiting and the perception of fair versus unfair waiting. The service provider is less able to control these aspects of the perceived waiting environment than information about the wait duration, reasons to wait, occupation during waiting and group vs. solo waiting.

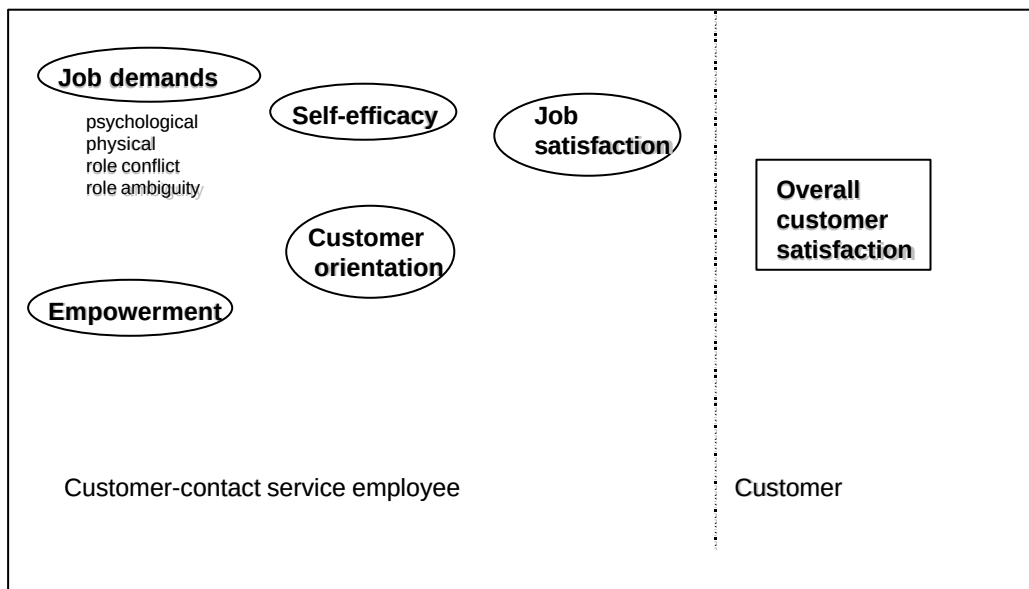
Figure 7. Studied concepts in study 2 (*chapter 4*).



3.2.4. Study 3 (chapter 5)

Study 3 (chapter 5) studies the link between customer-contact service employees and customer service evaluations: Employee-related antecedents of customer satisfaction: how does stress and job satisfaction of service employees influence customer satisfaction? (chapter 5, see fig. 8). Therefore, we use the employee data on individual level and aggregate the customer data on outpatient clinic level. The relationship between job satisfaction and overall customer satisfaction plays a central role in this analysis. In a first step, we analyze the impact of job demands and empowerment as organizational antecedents of job satisfaction. Self-efficacy is taken into consideration as mediator between the organizational characteristics and job satisfaction. In a second step, we study the same organizational characteristics as antecedents of overall customer satisfaction. Customer orientation of the service employee is treated as mediator of this relationship. Finally, we test the ‘Satisfaction Mirror’ to see what the impact of job satisfaction is on overall customer satisfaction and the impact of overall customer satisfaction on job satisfaction.

Figure 8. Studied concepts in study 3 (chapter 5).



3.2.5. Study 4 (chapter 6)

Study 4 (chapter 6) incorporates an aspect of customer-contact service employee behavior (empowerment), a link to the customer waiting experience with the inclusion of customer wait satisfaction and post-consumption service evaluations (service quality perceptions and overall customer satisfaction): The effect of empowerment to customer service evaluations.

The fourth study (chapter 6, see fig. 9) examines more in depth the relationship between different customer evaluations of the delivered service. We use the customer data on individual level and aggregate the service employee data on outpatient clinic level. We incorporate wait satisfaction in order to test the impact of empowerment as employee-related antecedent on service quality perceptions and overall customer satisfaction.

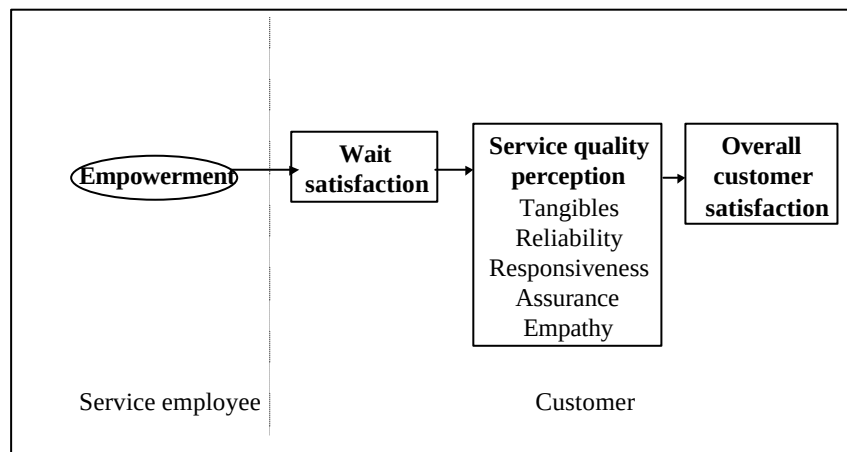


Figure 9. Studied concepts in study 4 (chapter 6).

3.2.6. Chapter 7 (conclusion)

In *chapter 7*, we summarize and discuss the results of the studies of this dissertation. After an overview of the results of each study, we formulate theoretical and practical implications. No study is devoid of limitations and we try to give suggestions for future research based on the findings of this dissertation.

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Chapter 2

Patients' and personnel's perceptions of service quality and patient satisfaction in nuclear medicine

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PATIENTS' AND PERSONNEL'S PERCEPTIONS OF SERVICE QUALITY AND PATIENT SATISFACTION IN NUCLEAR MEDICINE

Stefanie De Man¹, Paul Gemmel¹, Peter Vlerick², Peter Van Rijk³, Rudi Dierckx⁴

¹ Faculty of Economics and Business Administration, Ghent University, Belgium

² Faculty of Psychology and Educational Sciences, Ghent University, Belgium

³ Department of Nuclear Medicine, Utrecht University Hospital, The Netherlands

⁴ Department of Nuclear Medicine, Ghent University Hospital, Belgium

PATIENTS' AND PERSONNEL'S PERCEPTIONS OF SERVICE QUALITY AND PATIENT SATISFACTION IN NUCLEAR MEDICINE

Abstract.

Patients' and personnel's perceptions of service quality were analysed to position nuclear medicine organisations in the service triangle theory of Haywood-Farmer [*Int J Production and Operations Management* 1988; 6:19-29]. After distinguishing the service quality dimensions of nuclear medicine, a comparison was made between the service quality perceptions of patients ($n=259$) and those of personnel ($n=24$). We examined the importance of different service quality dimensions by studying their relationship to patient satisfaction. The proposed five dimensions of SERVQUAL, the most commonly used service quality measurement scale, were not confirmed. Patients considered tangibles and assurance as one dimension, while the original empathy dimension was separated into empathy and convenience. Personnel perceived all service quality dimensions as less good than did patients, except for empathy. Results indicated that patients' perception of service quality was correlated with patient satisfaction, especially in terms of reliability and tangibles-assurance. Based on these service quality dimensions, we suggest that nuclear medicine services need to optimise their physical and process component and the technical skills of personnel.

Keywords. Service triangle - Service quality - Personnel - Patient satisfaction

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PATIENTS' AND PERSONNEL'S PERCEPTIONS OF SERVICE QUALITY AND PATIENT SATISFACTION IN NUCLEAR MEDICINE

Introduction

In order to position nuclear medicine organisations in the service triangle theory of Haywood-Farmer [1], patients' and personnel's perceptions of service quality are analysed. The service triangle is an aid to classifying services, to positioning organisations relative to each other and to understanding quality management issues in various service situations [2]. A service organisation is conceptualised as consisting of three components (Fig. 1), and any particular service organisation's centre of gravity - which is determined by the relative weight of each component - will be closer to one of the sides of the triangle. The "physical and process" component represents all processes, procedures, systems, structure, etc. of the organisation. The "human capital" component at the bottom of the triangle can be divided into "technical skills", i.e. characteristics related to doing a good job as a professional doctor, nurse etc. (education provides these skills), and "personal characteristics", i.e. characteristics not associated with any particular profession but with particular persons.

We use the service triangle as a strategic tool to compare strategies of nuclear medicine departments concerning the three corners of the triangle. One department can choose to be more personnel oriented (emphasising the friendly interaction between patient and personnel), while another can choose to be more process oriented (emphasising efficient, fast and smooth contact between patient and personnel). This is a strategic choice each department must make.

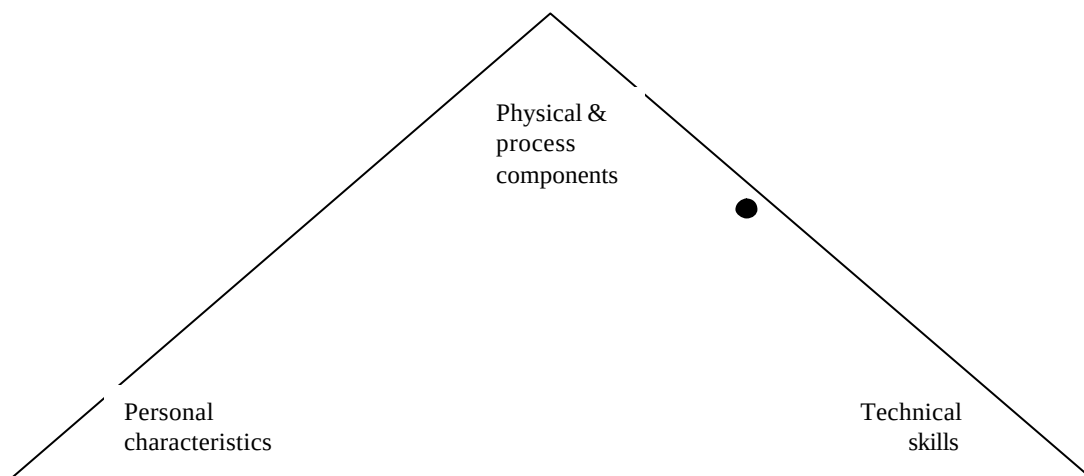


Figure 1. Suggested place of nuclear medicine services in the service triangle

Mills and Margulies [3] differentiated services based on the nature or intensity of interactions: maintenance-interactive services (short and standardised services, belonging at the top of the service triangle), task-interactive services (requiring intense interaction, since the customer has no knowledge about techniques necessary to provide the service, situated at the right corner of the triangle) and personal-interactive services (requiring employees to give personal service to customers who are typically unaware of or imprecise about the service situation, belonging at the left corner of the service triangle).

The nature of services provided by nuclear medicine leads us to expect that the centre of gravity of a nuclear medicine department will be on the side of the "physical and process" component and technical skills. Based on patients' and personnel's perception of service quality, we looked for information to support the statement that nuclear medicine services are task-interactive rather than personal-interactive.

First, we tried to distinguish different service quality dimensions for patients in order to explore how patients perceive the quality of nuclear medicine services.

Several nuclear medicine departments provide the same types of services, but not the same quality of service and quality does not improve unless it is measured. Articulation of service quality by patients does not happen easily - the patient can only assess it - thereby making service quality measurement more subjective than objective. Because services are intangible and heterogeneous, and their consumption and production occur simultaneously, service quality measurement has to be based on perceived quality rather than objective quality [4,5].

Service quality can be defined as an overall judgement similar to "attitude towards the service" and related, but not equivalent, to consumer satisfaction [6]. Service quality in health care is regarded as a multidimensional construct [7]. Two dimensions of service quality must be taken into consideration [8, 9]: technical (or outcome quality) and functional (or process quality). Technical quality in the health care sector is defined primarily on the basis of technical accuracy of medical diagnosis and procedures or conformity with professional specifications. In this research, we looked only at the second dimension of service quality: the functional quality of nuclear medicine services. Functional quality refers to the way in which health care services are delivered to patients. The subjective nature of service quality - perceived service quality involves the subjective response of people - makes the measurement task more complex [10]. Unlike technical quality, for which there are objective measurement instruments, service quality provides patients with fewer objective cues to evaluate functional quality, so that subjective evaluation is relied on in judging service quality. We do not pretend to offer statements about the overall quality of the nuclear medicine departments, since we did not measure the technical quality of nuclear medicine departments. Rather, we just compared the departments with regard to the service quality perception of patients.

The SERVQUAL perception scale was used for the first time in a nuclear medicine department [6]. The most commonly used instrument to measure service quality in services, SERVQUAL defines service quality on the basis of comparison of expectations with perceived service performance. SERVQUAL studies the dimensions of service quality in a multiple-item scale for measuring consumer expectations and service quality perceptions [6, 11, 12]. In its original form,

SERVQUAL contains 22 pairs of Likert-type items. Twenty-two items measure respondents' expected levels of service for a particular service industry, while the other 22 matching items measure the perceived service level provided by a particular organisation within that service industry. Service quality is measured by the score difference between the perceived and the expected level of service provided.

A major shortcoming of the SERVQUAL procedure, as presented by Parasuraman et al., concerns the incorporation of expectations into a measurement of service quality [11, 12, 13, 14, 15]. There appear to be serious problems with the value of the expectations battery as proposed, namely, the ability to administer it, and the factor analysis of the difference between perceptions and expectations. Some alternative procedures for overcoming these problems have been suggested [16]. Patterson and Johnson [17] state that service quality is not directly and indirectly influenced by expectations. Perception by itself seems to be a stronger predictor of the service quality concept [13, 15, 18, 19, 20, 21]. Parasuraman [22] argues that the perceptions-only approach to measuring quality is even more acceptable from a predictive validity point of view, as it explains considerable variance in overall service quality ratings.

SERVQUAL studies the dimensions of service quality in a multiple-item scale [6]. Initially, Parasuraman et al. [23] defined ten service quality components, which they later reduced to five: reliability (ability to perform the promised service reliably and accurately), assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence), tangibles (physical facilities, equipment and appearance of personnel), empathy (caring, individualised attention provided to customers) and responsiveness (willingness to help customers and provide prompt service) [6].

SERVQUAL has been tested in health care settings, and the findings have been mixed [2, 24, 25, 26]. In health care research there is no agreement on the number of dimensions found, with the range varying from one [26] to nine [16]. Therefore, it is necessary to use factor analysis to explore which service quality dimensions patients of nuclear medicine services use to assess quality. The original SERVQUAL dimensions can be positioned in the service triangle (Fig. 2).

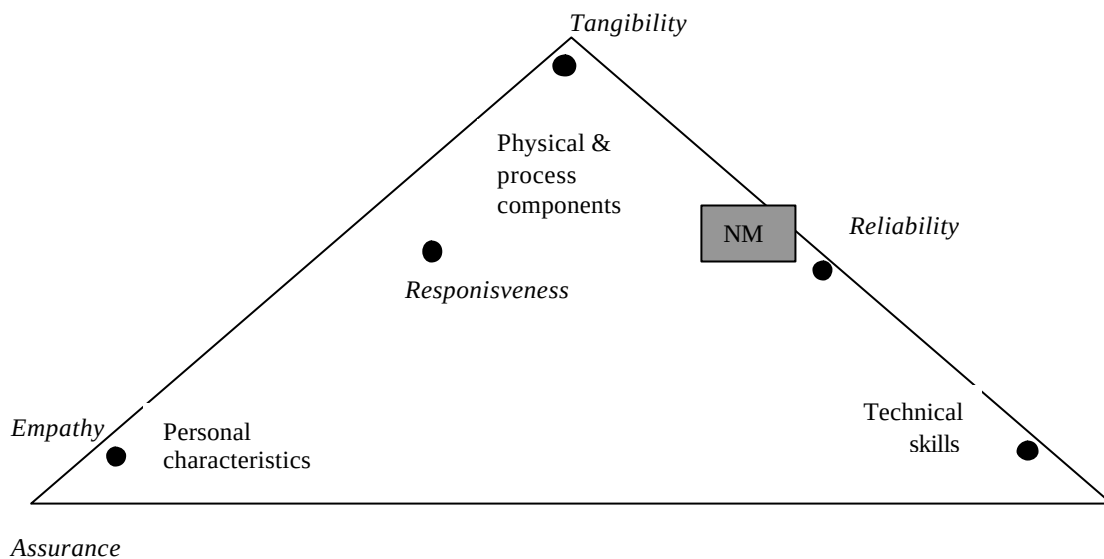


Figure 2. Service quality dimensions positioned in the service triangle

Second, we compared health care employees' perception of service quality with patients' perception. We expected that personnel and physicians would evaluate service quality more in terms of technical quality rather than in terms of functional (process) quality [10]. Whereas patients base their evaluation of quality on interpersonal and environmental factors, medical professionals have always regarded functional quality as being less important.

Third, we evaluated the perception scores as a function of their importance for patient satisfaction. Since service quality and patient satisfaction have been shown not to be the same construct [25], we examined the relationship between service quality and patient satisfaction in order to study the importance of service quality dimensions for overall patient satisfaction. For example, tangibles can be perceived by patients as excellent but be of no importance to patient satisfaction.

Service quality is a form of attitude representing a long-run, overall evaluation, whereas satisfaction represents a more short-term, transaction-specific judgement [14]. Patient satisfaction can be defined as a type of attitude that reflects the positive and negative feelings developed by a patient in reference to a service after its purchase [27, 28, 29]. Patients must have experienced a service to achieve satisfaction, while perceived service quality is not necessarily the result of any

particular service encounter [17, 20, 30, 31]. Cronin and Taylor [14] state that consumers of health services are not able to distinguish service quality from satisfaction when they respond to patient satisfaction or service quality surveys. Woodside et al. [29] concluded that perceptions of service quality are positively associated with overall patient satisfaction. Vandamme and Leunis [5] found evidence that service quality and patient satisfaction are reflected by the same dimensions.

If service satisfaction and quality cannot be viewed as isomorphic and are conceptually different constructs, then the obvious question to ask is how these constructs are related. On the basis of a review of the literature by de Ruyter et al. [32], one could argue that theoretical and empirical evidence for a particular sequential order of service quality and satisfaction remains inconclusive. The lack of consensus in the literature about the sequential order of satisfaction and service quality has led us to accept a non-recursive linear structure between these concepts.

Materials and methods

Patient population. The sample consisted of patients visiting the nuclear medicine department in the University Hospital during 4 weeks chosen at random in October 2000, December 2000, February 2001 and April 2001. Altogether, 416 patients received the questionnaire, of whom 259 completed and returned it (response rate: 62%). The subjects ranged in age from 1 to 89 years, with a mean age of 44.91 years (SD=16.76), and 41.7% were male.

Personnel population. During the same weeks in which the patients' survey was administered, the personnel of the ambulatory care clinic received a link to the personnel questionnaire that was placed on the website of the nuclear medicine department. All employees of the department ($n=30$) were approached to fill in the questionnaire. Finally, 72 personnel questionnaires were filled in [response rate: 60% (72/120 possible responses in the four different weeks)]. No differences were found between employees who filled in the questionnaire and employees who did not, according to function, age and gender. The personnel had a mean age of 37 years

(SD=10.90), and 65% were male. The questionnaire was filled in not only by physicians and nurses but also by physicists, laboratory staff and administrative personnel.

Patient questionnaire. A self-administered questionnaire was developed consisting of three major parts. The first section included demographic questions and questions with respect to previous ambulatory care clinic visits of the patient.

The second part of the SERVQUAL perception scale included 22 statements relating to patients' perceptions of the quality of the service that the nuclear medicine department of the University Hospital delivered. The items were customised in wording and tailored to the specific service setting of this study, as proposed by Carman [16]. The statements relating to patients' expectations of the quality of service that excellent ambulatory care clinics should offer were not included in the questionnaire.

The third section included one question about overall patient satisfaction. In the health care literature, the conceptualisation of satisfaction as being global is well accepted [33, 34]. In accordance with Woodside et al. [29], we used only one measure of patient satisfaction.

The seven-point Likert response format (ranging from "strongly disagree" =1 to "strongly agree" =7) was adopted for all questions. A mixture of negatively and positively worded items was used because the large number of items in the total questionnaire could lead to unreliable answers. In order to prevent distortion of the responses by acquiescence bias or "yea-saying or nay-saying" tendencies, about half of the items were negatively worded with the other half positively worded - reverse statement polarisation [35, 36, 37, 38, 39].

Personnel questionnaire. The personnel questionnaire contained demographic questions. The same 22 items of the SERVQUAL perception scale used for patients were used to measure the perception of service quality of personnel. The personnel questionnaire also had a simple question about what personnel thought about patients' overall satisfaction.

Results

Missing data

Observations with >10% missing values were excluded from the analysis. Observations with <10% missing values in the complete list were not excluded from the analysis. In these cases, missing values were replaced by the sample mean of the observed variables. Bollen supports this because "perhaps the third most common means to handle missing data is to estimate missing values.... The missing values may be replaced by the sample mean of the observed variables, a regression estimate of its values or by some other number" [40]. In following this procedure, Vandamme and Leunis [5] remark that variances can be affected and that the distributions of variables are likely to become non-normal.

Only items P9 ("the department keeps its records accurately and without mistakes") and P17 ("the personnel get adequate support from the University Hospital") of the SERVQUAL perception scale were excluded from analysis due to the high level (more than 10%) of missing values in the patient data.

Service quality dimensions of patients' perceptions

The analyses conducted related to the dimensionality and reliability of the SERVQUAL perception scale. The 20 perception items were factor analysed using principal component factor analysis together with a varimax rotation (varimax rotation was selected to guard against multi-collinearity and because a clearer factor pattern emerged). Based on the eigenvalue criterion (keeping all factors with an eigenvalue larger than 1), four factors emerged. Items with no clear loading (achieving only one loading higher than .40) on a particular factor (P7: "performs the service correctly the first time", and P16: "the personnel are consistently courteous") were removed from the set. Five factors and 18 items were retained, explaining 64% of the total variance. The factor loading matrix (Table 1) suggests the following labelling of the five factors:

- Tangibles assurance ($\alpha = 0.85$)

- Reliability ($\alpha = 0.84$)
- Responsiveness ($\alpha = 0.71$)
- Empathy ($\alpha = 0.83$)
- Convenience ($\alpha = 0.64$)

The dimensions obtained in this study do not identically represent the dimensionality of the SERVQUAL scale (i.e. five factors) proposed by Parasuraman et al. [6]. "Convenience" can be defined as the department's efforts to make the service more accessible to patients. The Cronbach-Alpha coefficients for the five dimensions are all acceptable. The overall coefficient alpha was 0.87.

Table 1. Principal component analysis ($n = 259$)

Perception		Loadings				
Scale items		1	2	3	4	5
P1.	Has up-to-date equipment	.653	.005	.175	.009	.146
P2.	Physical facilities are visually appealing	.815	-.002	.196	.010	-.009
P3.	Employees are neat in appearance	.679	.197	.006	.006	-.006
P4.	Physical facilities in accordance with service	.807	.004	.144	.001	-.124
P5.	When something is promised, it is done	.273	.216	.205	.767	.001
P6.	Shows sincere interest in solving problems	.594	.340	-.005	.321	.119
P8.	Provides services at the time promised	.264	.145	.237	.791	.007
P10.	Tells you when services will be performed	.001	.003	.688	.345	.003
P11.	Gives prompt service	.106	.006	.799	.251	.119
P12.	Personnel are always willing to help	.174	.348	.435	.010	.374
P13.	Never too busy to respond to your requests	.009	.312	.630	.153	.009
P14.	Employees can be trusted	.594	.002	-.231	.271	.296
P15.	Feels safe in interaction with employees	.688	.113	-.008	.244	.230
P18.	Gives individual attention	.009	.832	.172	.157	.002
P19.	Has convenient operating hours	.006	.009	.007	.145	.782
P20.	Employees give personal attention	.122	.844	.005	.165	.165
P21.	Has your best interests at heart	-.002	.275	.163	-.114	.760
P22.	Employees understand specific needs	.141	.701	.160	-.004	.305
Percentage variance explained		31%	13%	8%	6%	5%
Cumulative variance explained		31%	44%	52%	58%	64%

Results from item analysis for the perception scores are provided in Table 2. The highest score was obtained for the appearance of the employees (mean=6.13, SD=0.91), and the lowest for never being too busy to respond to requests (mean=4.61, SD=1.83).

Table 2. Comparisons of patients' ($n = 259$) and personnel's ($n = 72$) perceptions of service quality

Items in each dimension	Perceptions		
	Mean Patients	Mean personnel	T-test
Tangibles-assurance	$\alpha = 0.85$	$\alpha = 0.75$	
1. Has up-to-date equipment	5.99 (s.d.=1.04)	5.86 (s.d.=0.74)	0.97 (p=0.33)
2. Physical facilities are visually appealing	4.88 (s.d.=1.60)	3.94 (s.d.=1.39)	4.47 (p=0.00)
3. Employees are neat in appearance	6.13 (s.d.=0.91)	5.59 (s.d.=0.79)	4.54 (p=0.00)
4. Physical facilities in accordance with service	5.17 (s.d.=1.49)	4.07 (s.d.=1.38)	5.89 (p=0.00)
6. Shows sincere interest in solving your problems	5.99 (s.d.=1.07)	5.46 (s.d.=0.85)	3.72 (p=0.00)
14. Employees can be trusted	5.95 (s.d.=0.99)	5.84 (s.d.=0.72)	0.83 (p=0.41)
15. Feel safe in your interaction with employees	6.08 (s.d.=0.93)	5.51 (s.d.=0.70)	4.68 (p=0.00)
Reliability	$\alpha = 0.84$	$\alpha = 0.48$	
5. When something is promised, it is done	5.50 (s.d.=1.38)	4.75 (s.d.=1.09)	4.16 (p=0.00)
8. Provides services at the time promised	5.35 (s.d.=1.56)	4.78 (s.d.=1.01)	3.60 (p=0.00)
Responsiveness	$\alpha = 0.71$	$\alpha = 0.48$	
10. Tells you when services will be performed	4.68 (s.d.=1.88)	4.40 (s.d.=1.13)	1.47 (p=0.14)
11. Gives prompt service	4.65 (s.d.=1.83)	4.42 (s.d.=1.36)	1.15 (p=0.25)
12. Personnel are always willing to help	5.77 (s.d.=1.44)	5.77 (s.d.=1.10)	0.00 (p=0.99)
13. Never too busy to respond to your requests	4.61 (s.d.=1.83)	3.42 (s.d.=1.34)	5.79 (p=0.00)
Empathy	$\alpha = 0.83$	$\alpha = 0.89$	
18. Gives individual attention	5.01 (s.d.=1.68)	5.59 (s.d.=0.85)	-3.88 (p=0.00)
20. Employees give personal attention	5.35 (s.d.=1.52)	5.70 (s.d.=0.79)	-2.50 (p=0.01)
22. Employees understand your specific needs	5.03 (s.d.=1.57)	5.47 (s.d.=0.87)	-2.96 (p=0.00)
Convenience	$\alpha = 0.64$	$\alpha = 0.46$	
19. Has operating hours convenient to you	5.65 (s.d.=1.41)	4.84 (s.d.=1.53)	4.10 (p=0.00)
21. Has your best interests at heart	5.90 (s.d.=1.40)	5.88 (s.d.=1.11)	0.08 (p=0.93)

The dimensions differed significantly from each other, except for convenience and tangibles-assurance ($t=0.309$, $P>0.1$). The convenience perception had the highest score (mean=5.78, SD=1.20), followed by tangibles-assurance (mean=5.75, SD=0.88), while responsiveness had the lowest score (mean=5.00, SD=1.24; Table 3).

Table 3. Means and s.d. of the five dimensions for patients ($n=259$) and personnel ($n=72$)

Dimension	Patients	Personnel	t-test
Tangibles-assurance	5.75 (s.d. = .88)	5.20 (s.d.=.62)	4.76($p=0.00$)
Reliability	5.43 (s.d. = 1.38)	4.78 (s.d.=.96)	4.44($p=0.00$)
Responsiveness	5.00 (s.d. = 1.24)	4.48 (s.d.=.77)	3.99($p=0.00$)
Empathy	5.14 (s.d. = 1.38)	5.58 (s.d.=.76)	-3.32($p=0.00$)
Convenience	5.78 (s.d. = 1.20)	5.40 (s.d.=1.06)	2.38($p=0.02$)

Comparison of service quality perceptions of patients and personnel

Since data on the perceptions of patients were collected at four different times, we collected personnel information for each week of the patients' survey. F tests showed that the results for the 4 weeks did not differ significantly. We had too little SERVQUAL data (maximum $n=25$) for personnel to allow factor analysis of the SERVQUAL perception scale for personnel's perceptions of service quality. We chose to handle the SERVQUAL perception scale in the same manner as patients' perceptions.

The dimension measuring perception of empathy scored highest for the personnel (mean=5.58, SD=0.76); the responsiveness factor had the lowest score (mean=4.48, SD=0.77). Results from item analysis for the performance perception

scores are provided in Table 2. The highest scores were obtained for having the best interests of the patients at heart (mean=5.88, SD=1.11) and use of up-to-date equipment (mean=5.86, SD=0.74), and the lowest for never being too busy to respond to requests (mean=3.42, SD=1.34).

The overall coefficient value for the SERVQUAL perception scale was 0.81. The overall SERVQUAL perception score was significantly higher for patients (mean=5.47, SD=0.82) than for personnel (mean=5.03, SD=0.51) ($t=4.73$, $P=0.00$). There were significant differences between the perceptions of patients and those of personnel for all SERVQUAL dimensions (Table 3). Patients scored all SERVQUAL dimensions higher than did personnel, except for the empathy dimension, where personnel (mean=5.58, SD=0.76) scored significantly higher than did patients (mean=5.14, SD=1.38).

On the individual item level there were significant differences between the perceptions of patients and those of personnel (Table 2), except for items related to the use of up-to-date equipment ($t=0.971$, $P=0.33$), trust in employees ($t=0.83$, $P=0.41$), provision of information on when services will be performed ($t=1.47$, $P=0.14$), provision of a prompt service ($t=1.15$, $P=0.25$), willingness to help ($t=0.00$, $P=0.99$) and having patients' best interests at heart ($t=0.08$, $P=0.93$). Patients perceived the physical facilities as more visually appealing (mean=4.88, SD=1.60) and more in accordance with the service (mean=5.17, SD=1.49) than did the personnel (mean=3.94, SD=1.39 and mean=4.07, SD=1.38, respectively). Personnel found that the neatness of personnel (mean=5.59, SD=0.79) deserved a lower score than it was given by patients (mean=6.13, SD=0.91).

Relation of service quality perceived by patients and patient satisfaction

In accordance with Lam [26], we added together individual item scores for service quality perceptions to obtain an overall score (mean=5.47, SD=0.82). That score correlated with an overall patient satisfaction item (mean=5.95, SD=0.88). The correlation between the overall service quality score and overall patient satisfaction was 0.73 ($P<0.01$).

The correlations of the five service quality dimensions with patient satisfaction are shown in Table 4. All correlations were statistically significant. Tangibles-assurance was the factor that correlated most strongly with overall patient satisfaction ($r=0.640$), while convenience correlated least well with patient satisfaction ($r=0.306$).

Table 4. Correlations of dimensions of service quality with patient satisfaction ($n = 259$)

Items	1	2	3	4	5	6
1. Tangibles-assurance	-	.539*	.288*	.328*	.118	.640*
2. Reliability		-	.451*	.413*	.211*	.633*
3. Responsiveness			-	.407*	.228*	.408*
4. Empathy				-	.437*	.441*
5. Convenience					-	.306*
6. Patient satisfaction						-

*Significant beyond the 0.01 level.

Personnel did not have an accurate view of patient satisfaction: personnel perceived patient satisfaction (mean=5.26, SD=0.72) to be lower than it was actually experienced by their patients (mean=5.95, SD=0.88, $t=6.03$, $P=0.00$).

Discussion

In order to position nuclear medicine services in the service triangle theory of Haywood-Farmer, we first studied the service quality perception of patients. The perception measurement process distinguished five dimensions: tangibles-assurance, reliability, responsiveness, empathy and convenience. The number and interpretation of the dimensions of the service quality construct in this study corresponded to the original SERVQUAL instrument [6], with two alterations: the original dimensions

"tangibles" and "assurance" were collapsed into one factor, and the "empathy" dimension was divided into two factors. Because a nuclear medicine department is more task-interactive than personal-interactive, we expected that patients would see interaction with and trust in the employees as part of the tangible aspects. Empathy is more about how personnel understand patients, one of the original ten dimensions [6], while convenience, referring to the efforts to make the department more accessible for patients, emphasises the intentions of the nuclear medicine department. Responsiveness and reliability corresponded to the same items as in the original SERVQUAL measures.

Patients gave the highest scores to the tangibles-assurance and convenience dimensions. Tangibles and assurance may have been scored higher because patients have no knowledge about the quality of equipment. The high score on convenience can be explained by the content of the items of the dimension (having convenient operating hours and having the best interests of patients at heart). Patients' perception of lower service quality on the responsiveness dimension can be explained by the task-interactive nature of the service: the faster the patient leaves the department, the better. Therefore patients are probably more critical of the responsiveness dimension.

In accordance with Lim and Tang's [4] suggestion that patients' perceptions of service quality are not matched by the perceptions of personnel, we found that patients perceived the overall service quality to be better than did personnel (including doctors, management and staff). Personnel were more critical in their rating of quality on the dimensions of tangibles-assurance, reliability, responsiveness and convenience. Perhaps this resulted from the greater experience of personnel with their workplace and a more critical assessment of their own interaction with patients, possibly due to the high work pressure that personnel experience. There were differences between personnel and patients in terms of perception of the attractiveness of the physical facilities in the nuclear medicine department. These can be attributed to the fact that most patients spend only a limited time in the department, some patients are not feeling well, and most expect a good outcome after their visit to the department. Personnel's greater experience with the infrastructure of the department (an infrastructure which does not allow privacy for the patients) may have

led to their perception of lower safety levels in interactions with the patient. Only for perceptions of empathy did the patients' rating come out lower than the personnel's. This shows the importance of personal characteristics in nuclear medicine services. Personnel have the perception that they are providing a lot of individual and personal attention and that they understand the needs of patients, while patients perceive this dimension to be less good.

Patient satisfaction and overall patient perception of service quality were strongly related in this study. This is in accordance with the results of Woodside et al. [29], supporting the finding that perceptions of service quality are positively associated with overall patient satisfaction. Since we did not find a perfect correlation, we do not conclude that patient satisfaction and service quality are the same constructs.

Out of the five dimensions distinguished here, the reliability dimension was strongly associated with overall patient satisfaction. Since it seems to be the most important dimension of service quality in the literature (e.g. [27]), we can conclude that the most important dimension of service quality is the one that has the greatest influence on patient satisfaction. But tangibles-assurance was also strongly correlated with patient satisfaction. This can be explained by the fact that patients do not have the knowledge to effectively evaluate the quality of the diagnostic intervention [24]. Convenience was the dimension least related to patient satisfaction. This can be explained by the content of the items (having convenient operating hours, and having the best interests of patients at heart). Convenience can be considered as less crucial in the whole service process.

In addition to the fact that health care providers' perceptions of patient expectations seem to be inaccurate [1], it is clear that personnel underestimate patient satisfaction with their department.

The service triangle can be used by nuclear medicine departments to position the department in relation to other nuclear medicine departments. With help from a service quality measurement process, the core needs of patients and the major areas for improvement can be delineated. Patients' perceptions of service quality show the

core needs of patients. Personnel's perceptions of service quality can outline other areas for improvement.

Since the reliability and tangibles-assurance dimensions are more important for patient satisfaction than is empathy, we conclude that nuclear medicine is a task-interactive rather than a personal-interactive service, and we suggest that the centre of gravity of nuclear medicine services should be on the side of physical components/technical skills.

Nuclear medicine services will have to optimise their physical and process component and the technical skills of personnel if they want to increase patient satisfaction and patients' perception of service quality.

Implications

Our findings have several implications for medical practice. The importance of perceived service quality in affecting patient satisfaction is shown by the results discussed above, providing justification for marketing activity to measure and improve customer satisfaction with service encounters in ambulatory care clinics [42, 43].

The results indicate that patients perceive the department as performing very well on tangibles-assurance and convenience. Since personnel perceive these service quality dimensions in significantly different ways from the patients, management must be aware that investment in these areas will not result in perceptions of higher service quality by patients. It is more important, from a marketing perspective, to invest in attention for patients, since patients perceive empathy to be less good than do personnel. The fact that personnel have a more positive perception of empathy than do patients can be seen as an example of the medical field being slow to perceive itself as a total service industry, with customers who also happen to be patients [44].

Both personnel and patients recognise responsiveness as an area requiring improvement in order to build a more patient-focussed attitude towards service delivery. The SERVQUAL dimension of "responsiveness" includes a component addressing waiting time. Based on the fact that waiting is inherent in contracting health care services and that the reliability of technical results is difficult for the

average patient to evaluate [45], waiting could be an important element of dissatisfaction in the health care environment [27]. Hence, to improve patients' perception of service quality, managers and doctors should focus on the responsiveness dimension, i.e. promptness of service delivery and provision of service at the promised time.

We identified opportunities for change (e.g. improving promptness of service) that are based on actual patients' opinions. However, the economic consequences (in terms of costs) were not taken into account [46]. Active management of consumer perceptions of health care quality is important for several reasons. First, evaluations of higher quality are related to satisfaction, to intention to use a service again in the future if necessary [24, 29, 30], to compliance with advice and treatment regimens [47], to choice of provider or plan, to decreased turnover and malpractice law suits [48] and possibly to better health outcomes [44]. Second, various agencies, such as the European Association of Nuclear Medicine (EANM), call for the solicitation of consumer feedback as a condition of accreditation. Consumer feedback is also stipulated as a condition of accreditation by ISO 9002. Third, high levels of consumer-perceived quality have been shown to be positively related to financial performance in health care organisations [49, 50].

Limitations and further research

No research study is devoid of limitations, and this study is certainly not an exception.

1. We opted to use perception of service quality as a predictor of the service quality concept [13, 15, 18, 19, 20, 21] since the objective measurement of service quality is not possible. Other authors claim that the incorporation of expectations is necessary to measure service quality [6, 16]. Further research should examine whether, in health care, the use only of perceptions to predict service quality is more acceptable than the expectations-perceptions approach.
2. There is a need for more evidence on SERVQUAL as a tool for measuring service quality perceptions of employees. Since the number of employees in

this ambulatory care clinic is rather small, it is necessary to test the SERVQUAL perception scale in other ambulatory care clinics.

3. The response rate to the personnel questionnaire can be considered low. Most cases of non-response were due to absence of the personnel during or after the observed weeks (holiday, sickness). We did not find differences between employees who filled in the questionnaire and employees who did not, according to function, age and gender. Also the questionnaire was seen as too long and most employees did not want to spend time after work to fill it in. Personnel considered the frequency with which the questionnaire was to be filled in (i.e. in each of four separate weeks) as too high.
4. This was an exploratory study, so the extent to which the results can be generalised is limited. The results cannot be generalised to other ambulatory care clinics since we took only one setting into consideration. Our study involved a single sample of patients who were able to fill in the questionnaire. There may be a difference between patients who are healthy enough to complete a questionnaire and those who are not.
5. The relationship between employees' and customers' perceptions of service quality, and the causes of the gap we have identified, needs further examination.

Conclusion

This study adds to the understanding of nuclear medicine services. Service quality dimensions can provide information about the position of a department in the service triangle. Patients perceive service quality along five dimensions: tangibles-assurance, reliability, responsiveness, empathy and convenience. The relationship between empathy and patient satisfaction allows us to conclude that personal characteristics are not as important as tangibles-assurance and reliability in nuclear medicine. Therefore, we suggest the centre of gravity for nuclear medicine should be on the side of physical components-technical skills in the service triangle (Fig. 2). This study also shows the strong relationship between overall service quality perception and patient satisfaction. There seems to be no congruence between

personnel's and patients' views, measured on service quality dimensions, and health care personnel seem to underestimate overall patient satisfaction.

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Chapter 3

Waiting for Godot: waiting in nuclear medicine

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Editorial

WAITING FOR GODOT: WAITING IN NUCLEAR MEDICINE.

Stefanie De Man⁵, Paul Gemmel⁶, Peter Vlerick⁷, Rudi Dierckx⁸

⁵ ICM doctoral fellow, Vlerick Leuven Ghent Management School, Reep 1, 9000 Gent, Belgium

⁶ Vlerick Leuven Ghent Management School, Reep 1, 9000 Gent, Belgium,; Faculty of Economics and Business Administration, Ghent University, Hoveniersberg 24, 9000 Gent, Belgium

⁷ Faculty of Psychology and Educational Sciences, Ghent University, H. Dunantlaan 2, 9000 Gent, Belgium

⁸ Division of Nuclear Medicine, Ghent University Hospital, De Pintelaan 185, 9000 Gent, Belgium

Editorial

WAITING FOR GODOT: WAITING IN NUCLEAR MEDICINE.

Waiting for Godot[♦] is a twentieth-century literature tragicomedy by Samuel Beckett in which nothing happens, nobody comes and nobody goes. The title has become an expression in itself. This notion of waiting may be an underestimated aspect of professional services provided in the health sector. Additionally, in medico-technical departments such as nuclear medicine, it may be an inevitable problem because of capacity constraints.

Waiting is an inevitable problem in many nuclear medicine departments. In nuclear medicine, waiting for a prearranged appointment happens due to scheduling problems (different investigations require different processing times, and some investigations are difficult to combine in such a way that there is no over- or undercapacity of available nuclear workers) and the need for additional scans (which cannot be predicted in advance). Barlow [1] found that waiting for a prearranged appointment is one of the hardest waiting experiences to occur in an outpatient clinic. The discomfort and time spent waiting influence patients' satisfaction and their perception of service quality [2,3]. But having patients waiting also influences employee behaviour. Nuclear workers are confronted with a combination of tasks at the same moment: injecting and scanning the patient, answering the telephone to plan new appointments and undertaking administrative work. Information about how many patients are waiting can enhance employee motivation or introduce role conflict [4]. Employee motivation can be increased by the willingness to work harder to serve the patients. The charitable character of medicine can motivate nuclear workers to work quicker to reduce patient anxiety linked to waiting for an unknown investigation. Role conflict arises when employees want to give enough attention to each patient (e.g. to provide patients with detailed information) but also wish to move quickly to the next patient in order to reduce the waiting time.

[♦] Waiting for Godot, Samuel Beckett, Faber and Faber Limited, London, 1965. ISBN 0-571-05808-6.

Hall [5] distinguishes two perspectives in measuring waiting times. From the organisation's perspective, the major concerns are the cost of providing the service and the impact of service quality on business. The advantage of expensive investments in additional capacity by recruitment of new employees and acquisition of extra scanning equipment can be limited by *waiting times experienced by nuclear workers*. For instance, patients who are late or do not show up for the investigation generate costs to the department. From the customers perspective, the major concerns are the quality of service provided, the length of time spent waiting and time spent undergoing the nuclear medicine procedures and the cost associated with this time. Especially in nuclear medicine it is important to manage the waiting times adequately since there are several waiting times in the service delivery: patients are confronted with waiting times before injection, before the scan and before receiving the report. The effect of the period of some hours spent waiting between the injection and the scan on the patient's overall perception of waiting is one of the major problems in nuclear medicine wait management.

Two approaches to managing waiting times are recognised: the operations management approach and the psychological approach to the waiting experience of the consumer [6].

The focus of the *operations management approach* to managing waiting times is to modify the design of the service delivery system to minimise objective waiting time. This is usually costly as it requires acquisition of equipment to deal with unexpected increases in demand, an increase in the degree to which nuclear workers can be rostered to cope with periods of high demand or an increase in the number of employees [7-9]. Less costly short-term strategies are a reduction in service quality to cope with increased demand, and allowing nuclear workers to prioritise the serving of clients above the performance of administrative work [9-11]. Demand management techniques can also reduce objective waiting times by the use of reservation systems and communication campaigns to spread demand more evenly over time [10].

The *psychological approach*, in contrast, focuses on influencing the consumer's subjective perceptions of waiting and is often less expensive than operations management-based approaches [1, 8]. This approach is based on the

principle that perception is reality [1]. By identifying the most important variables of the waiting experience in nuclear medicine, it is possible to determine the most appropriate management opportunities for reducing by psychological means the negative effects of waiting [12]. Such opportunities include the use of waiting perception management techniques, mood-enhancing strategies and service recovery strategies to manage the negative impact of delay.

Waiting perception management techniques are used to reduce the perception of the length of the waiting. Nuclear medicine departments can reduce the uncertainty with which the consumer is confronted before the service delivery [10, 11] or they can give waiting time guarantees [11]. It is possible to create expectations of waiting duration by consumers that are closer to reality [11], resulting in a better perception of the waiting duration, on the assumption that consumers expectations will have an impact on such perception. Communication is important in waiting perception management techniques. Explanation of and justification for the waiting, for example in terms of the production of injections and the reasons for additional unplanned scans, will have a positive effect [13]. Information about the waiting (e.g. its expected duration or the consumer's position in the queue, with continuous updates) [14] and indications that the staff care about the patient [10] are important in reassuring the patient.

Mood-enhancing strategies have been proved to yield positive effects [15]. A mood-enhancing environment uses elements such as colour, high and large windows with pleasant views or pictures on the waiting room wall. In nuclear medicine, mood-enhancing techniques can be useful because patients may be more inclined to reflect on the length of the waiting, its consequences for them and how they will deal with those consequences than in non-medical situations.

Service recovery strategies have been suggested as part of the psychological approach to managing waiting times by Sarel and Marmorstein [16], Kostecki [10], and McDougall and Levesque [17]. Service recovery strategies describe the actions that nuclear medicine departments can take in response to defects or failures [18]. McDougall and Levesque [17] found that managing pre-process, post-scheduled waiting with a combined effort involving financial compensation and assistance

(actions taken to rectify the problem) is a more effective recovery strategy than either financial compensation or assistance alone or no recovery at all. However, such a combined effort is not sufficient to make happy a patient who is dissatisfied with waiting, and financial compensation to patients is not common practice in nuclear medicine departments.

Although the psychological approach to managing waiting is less costly than the operations management approach, sometimes patients prior experiences of long waits can make them more predisposed to anger; where these patients are concerned, it is insufficient to manage waiting perceptions alone [16], and nuclear medicine departments will need to consider operations management techniques to reduce actual waiting times.

Future research should be directed at evaluating the impact of the different waiting management approaches on patients service evaluations and employees behaviour in nuclear medicine. It would be interesting, for example, to see whether appropriate communication about the cause of waiting and indications that employees care about the patient have a greater impact on patient satisfaction than do service recovery strategies.

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Chapter 4

The waiting experience and consumer service evaluations in outpatient clinics

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THE WAITING EXPERIENCE AND CONSUMER SERVICE EVALUATIONS IN OUTPATIENT CLINICS

Stefanie De Man⁹, Paul Gemmel¹⁰, Darline Vandaele¹¹, Peter Vlerick¹², Rudi Dierckx¹³

⁹ ICM doctoral fellow, Vlerick Leuven Ghent Management School, Reep 1, 9000 Gent, Belgium

¹⁰ Vlerick Leuven Ghent Management School, Reep 1, 9000 Gent, Belgium; Faculty of Economics and Business Administration, Ghent University, Hoveniersberg 24, 9000 Gent, Belgium

¹¹ FWO doctoral fellow, Faculty of Economics and Business Administration, Ghent University, Hoveniersberg 24, 9000 Gent, Belgium

¹² Faculty of Psychology and Educational Sciences, Ghent University, H. Dunantlaan 2, 9000 Gent, Belgium

¹³ Division of Nuclear Medicine, Ghent University Hospital, De Pintelaan 185, 9000 Gent, Belgium

THE WAITING EXPERIENCE AND CONSUMER SERVICE EVALUATIONS IN OUTPATIENT CLINICS

Abstract

This field study relates variables concerning the waiting experience – unoccupied vs. occupied waitings, uncertain vs. known waitings, unexplained vs. explained waitings and solo vs. group waitings -and consumer service evaluations in terms of wait satisfaction, service quality perceptions and overall consumer satisfaction. We investigated pre-process waiting in 9 outpatient clinics in a single hospital to test the effect of selected waiting experience variables on consumer service evaluations, with objective and subjective waiting times as covariates in the relationship.

Our results show that the waiting-related variables that we studied have more impact on tangibles and reliability than on the other service quality dimensions of Servqual. Providing information about the reasons for delay had a significant effect on the wait satisfaction, perception of tangibles and reliability and overall consumer satisfaction. The study contains several findings that should assist service managers to formulate more effective waiting perception strategies.

Keywords: waiting experience, consumer service evaluations

THE WAITING EXPERIENCE AND CONSUMER SERVICE EVALUATIONS IN OUTPATIENT CLINICS

Introduction

In times of increased competition in health care, the speed of service delivery can provide a significant competitive advantage (Davis and Heineke, 1994). Consumers are confronted with waiting for a variety of services in hospitals. Barlow (2002) found that one of the hardest waiting experiences is that which occurs in a hospital's outpatient clinic for a prearranged appointment. Kostecki (1996) calls this the appointment syndrome: when the appointment time is passed, even a short wait is annoying. Waiting is often a negative experience because of its economic and psychological costs (Kumar, Kalwani, and Dada, 1997), and delay is worse when consumers have high expectations about the service quality (McDougall and Levesque, 1999). The amount of time that consumers spend waiting, and their discomfort in waiting long periods before being seen by a doctor, can significantly influence their satisfaction with (Ramirez Valdivia and Crowe, 1997), and evaluation of the service (Taylor, 1994). The study of consumers' reactions while waiting for service (e.g., Baker & Cameron, 1996; Davis & Heineke, 1994; McDougall & Levesque, 1999) has now become a major field of research. It is necessary to understand the variables that influence the perception of waiting time and the potential impact on service evaluations (Beqiri and Tadisina, 2002; Taylor, 1994).

First, based on the existing literature, we present an integrated view of managing the perception of waiting times, which enables comparison with previous studies concerning different types of waiting. Second, we provide a brief overview of the existing research on waiting and the effect of waiting on consumer service evaluations. This leads to the development of our research questions. The scientific aim of this research is to investigate what the impact of waiting experience is on consumer service evaluations. The waiting experience variables investigated in this study are four propositions of Maister's psychology of the wait (1985): occupied versus unoccupied waiting, known versus uncertain waiting, explained versus unexplained waiting and group waiting versus solo waiting. The studied service

evaluations are wait satisfaction, the five Servqual dimensions (tangibles, reliability, responsiveness, assurance and empathy), and overall consumer satisfaction. The managerial purpose is to help managers to manage the waiting experience to achieve better service quality. Fourth, we describe our empirical study and present the results on waiting in outpatient clinical settings. Finally, we discuss the results of the empirical study and discuss their implications for future research and management.

1. An integrated view of managing the perception of waiting times.

1.1. Types of waiting in service delivery

Consumers are confronted with a sequence of events in service delivery. They may wait before, during, or after a transaction—that is, they may experience *pre-process*, *in-process* or *post-process waiting* (Dubé-Rioux, Schmitt, and LeClerc, 1989; Dubé, Schmitt, and Leclerc, 1991). Pre-process waiting occurs before the service delivery—for example, waiting before seeing the doctor in an outpatient clinic. This waiting can be due to a consumer's arriving early (*pre-schedule waiting*), a doctor's starting the consultation late (*post-schedule waiting* or *delay*) or *queue waiting* (when all consumers are queued without prearranged appointments) (Taylor, 1994). In-process waiting occurs during a service delivery itself, after a consumer has entered the consultation room—for example, while the doctor receives a phone call or performs administrative tasks not related to the consumer who is waiting. Post-process waiting occurs after a service is delivered—for example, when a consumer must wait to pay the bill (see Figure 1). Previous research has revealed that pre- and post-process waiting generates more intense negative affective responses than in-process waiting (Davis and Maggard, 1990; Dubé-Rioux et al., 1989; Dubé et al., 1991). Our empirical study in outpatient clinics was limited to pre-process waiting.

Figure 1: Sequence of waits in service delivery.

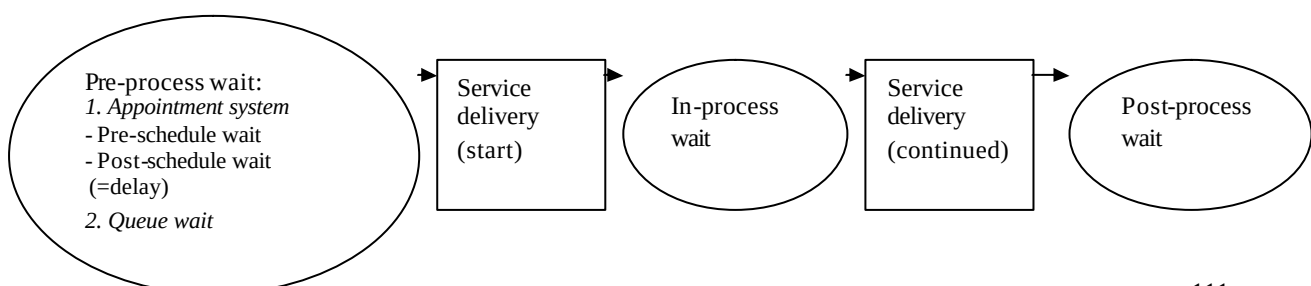
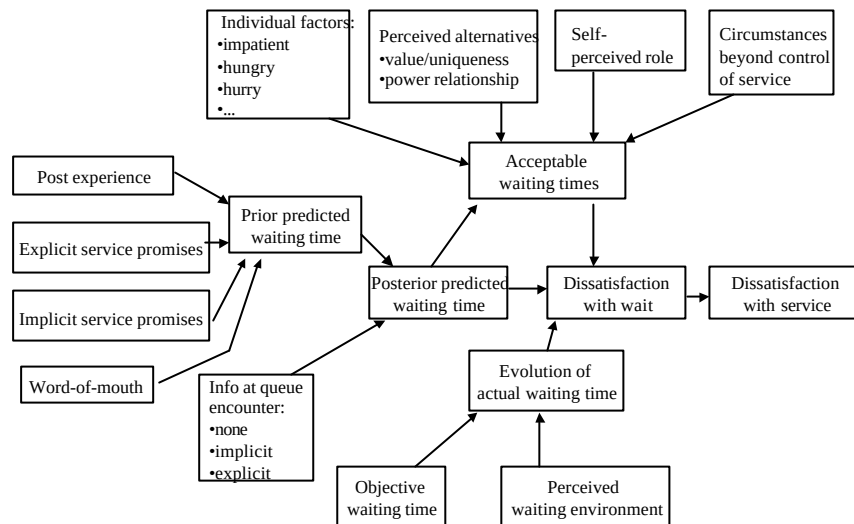


Figure 2: An integrated view of managing the perception of waiting times (Pruyn and Smidts, 1992)



1.2. Evolution of the actual waiting time

For each type of waiting described above, there is an according evolution of the actual waiting time on the part of the consumer (see Figure 2). The evolution of the actual waiting time is the subjective interpretation of how a consumer views the actual waiting time. The evolution of the actual waiting time incorporates the *perceived* duration of the waiting time is how individuals perceive and feel about the time waited before the service was delivered (Baker and Cameron, 1996). This can be expressed in terms of minutes or as ‘long’ vs. ‘short’ duration (Durrande-Moreau, 1999) and is influenced by objective waiting time and perceived waiting environment.

The evolution of the actual waiting time results from a combination of the objective duration, or clock time, of the wait and the consumer’s perceived waiting environment.

For the objective duration of the wait, the earlier mentioned types of waiting in service delivery can be distinguished.

The perceived waiting environment depends on certain conditions of the waiting situation. Maister formulated eight propositions concerning consumers' waiting experience: (1) pre-process versus in-process wait, (2) information about the wait duration, (3) information about the reasons to wait, (4) fair versus unfair wait (5) perceived value of the service, (6) occupied versus unoccupied waiting (7) solo versus group waiting, and (8) anxious versus calm waiting.

The Maister model (1985) proposes that pre-process waiting feels longer than in-process waiting. Before consumers have their first 'human' contact with the service personnel, they are more impatient and anxious, than those consumers that are already in the service delivery process, which leads consumers feel pre-process waiting longer than in-process waiting. Consumers wait with a great deal of more patience if they know they have to wait in contrast with uncertain waits and if they understand the causes for the delay; consumers feel unexplained waiting longer than explained waiting. Equitability in waiting is important for consumers, unfair waiting feels longer than equitable waiting. Consumers have a higher tolerance for waiting if the service is more valuable for them. Activities to 'fill' consumers' time (occupied waiting) makes the waiting time feeling shorter than unoccupied time. In most services, service encounter related activities make the wait feels shorter than unrelated activities. In contrast, in medical service encounters, it appears that activities not related to the service encounter distract consumers' attention from the upcoming activity and therefore have a more positive effect on the perception of the wait (Maister, 1985). When people wait in group, they feel comfortable by being able to express their anxiety about the wait to others. Anxious waiting feels harder than calm waiting; consumers want to have a feeling of control over the wait situation. Solo waiting feels harder than group waiting.

1.3. Consumer service evaluations

In the present study, service evaluation was defined in the same way as in previous research: wait satisfaction (Pruyn and Smidts, 1992), consumer satisfaction (Katz, Larson and Larson, 1991; Tom and Lucey, 1995; Davis and Heineke, 1998; Pruyn

and Smidts, 1998) and five service quality dimensions (Chebat, Filiatrault, Gelinas-Chebat, and Vaninski, 1995).

Wait satisfaction is considered as a pre-consumption service evaluation because it incorporates waiting for the core service to be performed (Liljander and Mattson, 2002). Post-consumption evaluations consist of the consumers' overall responses to the service encounter and encompass consumers' perceptions of service quality and overall consumer satisfaction. We define wait satisfaction as consumer satisfaction with all aspects of the waiting experience. Wait satisfaction is influenced not only by the evolution of the actual waiting time but also by posterior predicted and acceptable waiting times. *Posterior predicted waiting time* is not only a personal expectation (Durrande-Moreau, 1999) based on prior predicted waiting time (which is based on explicit and implicit service promises, post experience and word-of-mouth), but also incorporates the effect of information at the queue encounter. We define *acceptable waiting times* as the maximum number of minutes tolerated by a consumer in a specific situation of waiting for the minimum level of service expected (Pruyn and Smidts, 1998). *Overall consumer satisfaction* is a judgement that the service provides a pleasant level of consumption-related fulfilment, and is an evaluation of the entire consumption experience (Oliver, 1997). In health care, overall consumer satisfaction can be defined as a type of attitude that reflects the positive and negative feelings developed by a consumer in reference to a service after its purchase (Cleary and McNeil, 1988; Mowen, Licata, McPhail, 1993; Woodside, Frey, and Daly, 1989).

Service quality is an overall judgement similar to ‘attitude towards the service’ and is related in a more general way to consumer satisfaction, but is not equivalent to it (Parasuraman et al., 1988). Servqual (Parasuraman, Zeithaml, and Berry, 1988), a multiple-item scale to measure service quality that are sufficiently generic to cover a variety of services in different sectors, differentiates five service quality dimensions: reliability (the ability to perform the promised service reliably and accurately), assurance (the knowledge and courtesy of employees and their ability to inspire trust and confidence in consumers), tangibles (the physical facilities, the equipment and the appearance of personnel), empathy (the extent to which caring, individualized attention was provided to consumers) and responsiveness (willingness to help consumers and provide prompt service) Since its development, Servqual has been used in several health care settings (Jun, Peterson, and Zsidisin, 1998; Parasuraman, Zeithaml, and Berry, 1994a, 1994b).

Service quality and satisfaction have been shown not to be the same construct (de Ruyter, Lemmink, Wetzels, and Mattson, 1997). Service quality is associated with an attitude representing a long-term, overall evaluation, whereas satisfaction represents a more short-term, transaction-specific judgement (Cronin and Taylor, 1994). Consumers must have experienced a particular service to achieve satisfaction, while perceived service quality is not necessarily the result of any one service encounter (Oliver, 1993; Patterson and Johnson, 1993; Rust and Oliver, 1994; Taylor and Baker, 1994). If service satisfaction and quality are conceptually different constructs, the obvious question to ask is how these constructs are related. There is theoretical and empirical evidence for service quality resulting in satisfaction and not the other way around (Dabholkar, Sheperd, and Thorpe, 2000; Gotlieb, Grewal, and Brown, 1994; Oliver, 1997).

2. Overview on existing research on waiting and consumer service evaluations

For an overview of all studies relating waiting to consumer service evaluations from 1983 to 1998, see Taylor and Fullerton (2000), from 1998 to 2003, see table 1 (De Man, Vandaele, and Gemmel, 2004). We limit this overview to studies that relate waiting and consumer service evaluations in a research setting with

an appointment system. In this respect, we did not find any empirical study reporting the relationship between the waiting experience and wait satisfaction.

Table 1. Overview of the literature on waiting and service evaluations.

Author(s)	Research design	Type of waiting	Services studied	Dependent variable	Independent variables
Houston et al. (1998)	Cross-sectional survey	Queue waiting	Bank	Service quality evaluation	Attributions, negative affect, apology, acceptable waiting, waiting cost, expected wait, transaction importance, encounter with service employee, prior service experience, perceived duration
McKinnon et al. (1998)	Cross-sectional survey	Pre-processing delay	Outpatient clinics	Consumer satisfaction	Length of consultation, objective average waiting time
Pruyn and Smidts (1998)	Cross-sectional survey	Pre-processing delay	Outpatient clinics	Consumer satisfaction	Appraisal of waiting, objective waiting time, acceptable waiting time
Davis and Heineke (1998)	Cross-sectional survey	Queue waiting	Fast food sector	Consumer satisfaction	Actual, perceived and expected waiting time
Durrande-Moreau (1999)	Literature overview empirical studies				
Durrande-Moreau and Usunier (1999)	Cross-sectional survey	Queue waiting	Transport sector	Consumer satisfaction	Objective waiting time, time styles
Boudreaux et al. (2000)	Cross-sectional survey	Queue waiting	Urgent care	Consumer satisfaction	Consumer demographics, visit characteristics

Author(s)	Research design	Type of waiting	Services studied	Dependent variable	Independent variables
Nauman and Miles (2001)	Cross-sectional survey	Queue waiting	Urgent care	Consumer satisfaction	Occupied waiting, expected waiting, objective waiting time, voice
Cameron et al. (2003)	Experiment	Pre-process delay	Educational services	Overall experience	music, mood, length of wait

Table 1. Overview of the literature on waiting and service evaluations. (continued)

Service quality dimensions. Taylor (1995) found in an experimental study that objective waiting time, involving either a delay of 10 minutes or no delay at all, did not significantly influence consumers' responses to the Servqual dimensions of empathy and assurance, but did influence the tangibles and reliability dimensions. The more control the service provider was perceived to have over the cause of waiting, the lower the overall and specific evaluation of service dimensions (reliability, responsiveness and assurance). Tangibles, reliability and responsiveness were rated more highly by consumers whose waiting time was filled with activity than by consumers whose waiting time was not filled with activity. How the waiting time was filled—that is, whether the activity related to the service or not—had no impact on the tangibles, reliability and responsiveness dimensions. The highest evaluations were found for tangibles, reliability and responsiveness for waiting consumers who perceived that the service provider had low control over the delay, and whose time was filled with an activity. We did not find any other study that had examined the relationship between other waiting experience variables related to Maister's psychology of the wait (1985) and service quality dimensions.

Overall consumer satisfaction. McKinnon et al. (1998) found that satisfaction levels in health care situations were related to the length of consultation. Pruyn and Smidts (1998) found that the appraisal of waiting in outpatient clinics is a stronger determinant of service satisfaction than the objective waiting time. Three intermediary processes determined the impact of objective waiting time on satisfaction: disparity between perceived waiting time and objective time, the transformation of perceived waiting time into a long/short judgement, and the evaluation of any difference between perceived and acceptable waiting time.

A few studies looked at the relationship between these waiting experience variables related to Maister's psychology of the wait (1985) and general service evaluation and/or overall consumer satisfaction but not in a research setting with an appointment system. For instance, Dansky and Miles (1997) and Nauman and Miles (2001) found that keeping consumers occupied during waiting in a health care situation had a positive effect on their evaluation. Katz et al. (1991) found that providing consumers with information on the time that they can expect to spend in a

queue tends to improve the accuracy of consumers' perception of waiting, but does not influence their level of satisfaction. A positive effect of information on waiting duration on service evaluation was found by Hui and Tse (1996).

This empirical study investigated the impact of some variables of the waiting experience help to explain any variation that might occur in consumer service evaluations. The variables investigated are related to four of Maister's (1985) eight propositions on the psychology of waiting: uncertain vs. certain duration of waiting, unexplained vs. explained waiting, solo vs. group waiting, and unoccupied vs. occupied waiting. Our empirical study in outpatient clinics is limited to pre-process waiting because previous research has revealed that pre-and post-process waiting generates more intense negative affective responses than in-process waiting (Davis and Maggard, 1990; Dubé-Rioux et al., 1989; Dubé et al., 1991). Particular waiting situations vary in the control that the service provider exercises over the service design and the control that individuals exercise over their own characteristics (e.g., Beqiri and Tadisina, 2002; Durrande-Moreau, 1999; Jones and Peppiatt, 1996). Therefore, we did not include three other variables related to Maister's propositions because they are less under control of the service provider: perceived value of the service, fair versus unfair wait and anxious versus calm waiting. Perceived value of the service is primarily consumer-related. Individual characteristics of the consumer as e.g. personality and mood have a certain influence on anxious versus calm waiting and the perception of fair versus unfair waiting. The service provider is less able to control these aspects of the perceived waiting environment than information about the wait duration, reasons to wait, occupation during waiting and group vs. solo waiting.

Hence, we propose the following hypotheses:

- H1. Occupied waiting time leads to a more favourable service evaluation than unoccupied waiting time.
- H2. Known waiting time leads to a more favourable service evaluation than uncertain waiting time.
- H3. Explained waiting time leads to a more favourable service evaluation than unexplained waiting time.
- H4. Group wait leads to a more favourable service evaluation than solo wait.

We controlled whether the service environment, the individual outpatient clinic in which a wait occurred, had a significant effect on consumer service evaluations. Although the clinics are situated in the same university hospital, there were reasons to believe that the perceptions of service quality would be different from one clinic to another. The service environment of the clinics, including the design of the waiting rooms, the attitude of the service employees, and the appointment systems, were clearly different. Therefore, we propose following hypothesis:

H5. The service environment (the individual outpatient clinic in which a wait occurred) has a significant effect on the service evaluations.

There is evidence supporting a negative relationship between objective waiting time and consumer satisfaction in the fast-food sector (Davis and Vollmann, 1990; Davis and Heineke, 1998) and the banking sector (Katz et al., 1991). In the airline sector, research has shown a negative effect of objective waiting time on overall service evaluation (Taylor and Claxton, 1994) and on the service quality dimensions of responsiveness, empathy and assurance (Taylor, 1995). In health care, the effect of objective waiting time on overall consumer satisfaction is demonstrated in Dansky and Miles (1997). It is well recognised that subjective waiting time influences service evaluation (e.g. Katz et al., 1991; Kumar et al., 1997). Therefore, we introduced objective and subjective waiting times as covariates in the analysis. The expected positive correlation between objective and subjective waiting times suggests that at least one or the other variable should be included as covariate:

H6. Objective or subjective waiting times act as covariate in the relationship between the selected waiting experience variables and consumer service evaluations.

3. Empirical study

3.1. Data collection

On-site data were collected during one week in 9 outpatient clinics of a single university hospital. A questionnaire was given to the clinic's patients when arriving at that particular outpatient clinic with the request to fill in the document at home, after

the consultation. A total of 650 participants (mean age 44.1 years; 34.2% male) completed and returned a questionnaire. This is a response rate of 47.3%.

In the present study, the objective waiting time was measured from the consumer's arrival at the outpatient clinic until he or she was called in for consultation. This was entirely pre-process waiting time and comprised both pre-schedule and post-schedule waiting. While the objective duration of pre-process waiting can be due to pre-schedule, post-schedule and queue waiting, most empirical studies (e.g., Taylor, 1994) consider only post-schedule waiting time when referring to objective waiting time. The objective waiting time was measured by recording the clock time when each participant entered the outpatient clinic and the time when the consultation was started. The appointment times for each consumer were also noted. A coding system was used to match the objective waiting time, the outpatient clinic, and the information provided by each participant in the questionnaire. Participants were not informed that their objective waiting time had been recorded.

The self-administered questionnaire comprised five major parts. For an overview of the descriptive and actual formulation of the questions see Table 2. The first part covered demographic questions (age and gender) and questions concerning the participant's previous outpatient clinic visits. The second section contained questions concerning participants' perceptions of their current waiting experience, based on the relevant propositions from Maister (1985). Perceived waiting time was measured with an open-ended question requiring participants to estimate the duration in minutes of the wait that occurred before they were called into the appointment room. The third section included a single question about the wait satisfaction (i.e. 'In general, how satisfied are you with the waiting time?'). Drolet and Morisson (2001) argue that single item measures incorporate the necessary information about the construct measured. The fourth part included the 22 statements of the Servqual perception scale (Parasuraman, et al., 1988), concerning participants' perceptions of the quality of the service at that particular outpatient clinic of the university hospital, because perception alone appears to be a strong predictor of service quality (Cronin and Taylor, 1992; Oliver, 1993; Parasuraman, 1995; Teas, 1993; Woodruff, Cadotte, and Jenkins, 1983). Averaged scale sum-scores were used. The reliability values for the

five factors ranged between .71 and .85.. The final section included one question about overall consumer satisfaction. The seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) was used for the questions concerning service quality and overall consumer satisfaction.

3.2. Results

We used an analysis of covariance (ANCOVA) to assess the impact of unoccupied vs. occupied waiting, uncertain vs. known waiting, unexplained vs. explained waiting, solo vs. group waiting, and the outpatient clinic, on wait satisfaction, the five service quality dimensions and overall consumer satisfaction. Although we did not find a normal distribution for the wait satisfaction, five Servqual dependent variables and overall consumer satisfaction, we still used an ANCOVA because this tool is robust against deviations from normality (Tabachnick and Fidell., 1983:77). Only in the cases of reliability and responsiveness were we unable to reject the null hypothesis of equal variances across all groups. In other words, we found that the assumption of homogeneity of variance across all groups was not true for tangibles, assurance and empathy. ANCOVA is also robust against violations of this assumption, at least where all groups are of roughly equal size (Tabachnick and Fidell, 1983), as is the case in our study.

Table 2. Scales and dimensions used for the statistical analysis.

Scale/dimension Source/ item formulation	Number of items	Response Scale	a	Mean	SD
Occupied wait You had something to do during the wait?	1	yes/no	-	-	-
Known wait You knew you had to wait?	1	yes/no	-	-	-
Explained wait You knew why you had to wait?	1	yes/no	-	-	-
Solo wait You waited alone?	1	yes/no	-	-	-
Subjective waiting time How long did you wait before the consultation?	1	minutes	-	-	-
Wait satisfaction In general, how satisfied are you with the waiting time?	1	1-7	-	5.13	1.52
Tangibles Parasuraman, Zeithaml, Berry, 1988	4	1-7	.82	5.48	1.04
Reliability Parasuraman, Zeithaml, Berry, 1988	4	1-7	.84	5.94	.86
Responsiveness Parasuraman, Zeithaml, Berry, 1988	4	1-7	.71	5.22	1.19
Assurance Parasuraman, Zeithaml, Berry, 1988	4	1-7	.85	5.95	.78
Empathy Parasuraman, Zeithaml, Berry, 1988	4	1-7	.83	5.65	1.08
Consumer satisfaction In general, how satisfied are you with the outpatient clinic?	1	1-7	-	5.22	.71

Table 3 shows that the positive influence of occupied waiting (H1) is only weakly supported for consumers' empathy perception. Consumers whose time was filled with activities during the wait (occupied waiting) scored empathy higher (mean= 5.70, SD= 1.02) than consumers who had nothing to do during the wait (unoccupied waiting, mean= 5.49, SD=1.16) ($t = -2.031$, $p = .043$). None of the other studied service evaluations is affected by the extent to which the consumers waiting time is filled with activities.

The positive effect of known wait (H2) is only supported for tangibility, but the importance of known wait for the tangibles is not as high as explained waiting and the specific outpatient clinic.

The extent to which waiting is explained (H3) impacts consumers' wait satisfaction, tangibles, reliability, empathy, and overall consumer satisfaction. Consumers who knew why they must wait (explained waiting) scored reliability higher (mean = 6.13, SD = .71) than consumers to whom the reason for waiting was not explained (mean = 5.56, SD = 1.01) ($t = 6.37$, $p = .00$).

We did not find a significant effect of the difference between solo wait and group wait (H4) for consumer service evaluations.

The influence of outpatient clinic is only significant for the tangibility scores (H5 partially supported).

It is interesting to note that subjective waiting time is more significant as a covariate than objective waiting time. (However, analysis with objective waiting time alone did yield significance, H6 supported). Subjective waiting time is an important covariate in explaining the variance of consumer's perceptions of wait satisfaction and reliability. The covariate subjective waiting time is not unimportant in the case of responsiveness and empathy; the R^2 results, however, are still low. In our case, the subjective waiting time was an average of 7.41 minutes longer than the objective waiting time when participants were given no information on the cause of waiting. If some explanation was given, this overestimation of the consumers was reduced to 0.28 minutes ($p < 0.05$).

Table 3 shows that the variances of participants' perception rating on the wait satisfaction, tangibility and reliability dimensions are best captured by the variables we introduced in this model. The adjusted R^2 for the wait satisfaction is primarily influenced by explained wait and covariate subjective waiting time. The adjusted R^2 for the tangible dimension of .233 is primarily influenced by two main effects (known and explained wait) and the outpatient clinic. The adjusted R^2 of reliability of .120 is primarily influenced by the extent to which waiting is explained and the subjective waiting time. The limited adjusted R^2 for the other dependent variables (responsiveness, assurance, empathy and overall consumer satisfaction) supports our belief that the current model does not adequately explain the variance in perception between participants with regard to these aspects.

Table 3. Overview of Variance Analyses: effect of four of Maister's propositions (1985), outpatient clinic and covariates objective and subjective waiting time on wait satisfaction, the five service quality dimensions and overall consumer satisfaction (n=650).

Significant F-statistics reported

Dependent variables ?	Wait satisfaction (R^2 adj=.316)	Tangibles (R^2 adj=.233)	Reliability (R^2 adj=.120)	Responsiveness (R^2 adj=.025)	Assurance (R^2 adj=.014)	Empathy (R^2 adj=.033)	Overall consumer satisfaction (R^2 adj=.061)
Independent variables ?							
Occupied wait						4.40*	
Known wait		5.76*					
Explained wait	11.08**	14.33**	27.55**			8.56**	19.83**
Solo wait							
Outpatient clinic		13.36**					
Objective WT (C)							
Subjective WT (C)	39.43**		9.64**	8.50**		5.56*	

* p significant at .05 level

** p significant at .01 level

4. Discussion

This field study relates variables concerning the waiting experience—unoccupied vs. occupied waitings, uncertain vs. known waitings, unexplained vs. explained waitings and solo vs. group waitings—with consumer service evaluations in terms of the wait satisfaction, service quality dimensions of tangibles, reliability, responsiveness, assurance, and empathy and overall consumer satisfaction.

4.1. Consumer service evaluations

Our results show that consumer *wait satisfaction* is primarily influenced by the subjective waiting time and the provision of information about the causes why consumers have to wait.

Our results show that the waiting-related variables that we studied have more impact on the tangibles and reliability dimensions than on other service quality dimensions. This greater sensitivity of tangibility and reliability for the waiting experience is in line with the experiment of Taylor (1995), where delayed subjects rated tangible and reliability attributes lower than non-delayed subjects, while there were no lower ratings for the other service quality dimensions. In our field study, consumers' *tangibility* ratings are affected by the specific outpatient clinic and if the waiting was known and explained. It seems logical that the ratings of tangibles are related to the design and physical appearance of the waiting environment in the outpatient clinic where consumers wait. Arneill and Devlin (2002) found that the perceived quality of health care, and consumers' rating of how comfortable they felt in the waiting environment were significantly greater for well-appointed rooms than for those with outdated furniture, poor lighting, no artwork and a sterile appearance. Tangible evaluations can decrease in uncertain and unexplained waiting situations because consumers are confronted with a very high uncertainty about what is going to happen. The negative mood generated by this uncertainty can bias evaluations in a mood-congruent direction. The negative feeling of uncertainty can be carried over to the perception of the appearance of the physical facilities, equipment, and personnel.

Reliability deals with the dependability of the service (Parasuraman et al., 1988). If consumers do not receive information about the cause of waiting, it is possible that

consumers evaluate the service as undependable. Taylor (1995) suggested also that delay can also be seen as another sign of undependability. This finding is important, because reliability is generally considered as the most important service quality dimension.

It might well have been expected that the waiting experience variables would have a greater effect on the perception of *responsiveness* than on the tangibility or reliability perception. The limited amount of explanation by the waiting variables studied here on responsiveness can be explained as Taylor (1995) suggested: consumers perceive delay as an undependable service that is not related to the employees' willingness to help. Although our study confirms that there is no obvious effect of waiting experience variables on responsiveness, responsiveness fairly consistently received the lowest perception scores in each of the outpatient clinics. A Wilcoxon signed-rank test showed that 70% of all respondents gave a perception score for responsiveness that was lower than that for reliability. In other words, there seems to be a general problem with responsiveness in all outpatient clinics, and waiting perception techniques (at least, those that were studied here) have no effect on consumers' perception of poor responsiveness.

No significant effects of the waiting were found for *assurance*. Apparently, assurance is a more general feeling that is not influenced by the variables of the waiting experience included in our research.

The limited explanation of empathy (3%) by the studied waiting experience variables suggests that the total service encounter is taken into account to make an assessment of the *empathy* of the service personnel. Since the value for the consumer of medical care can be considered as high and anxiety can be considered high in medical service delivery, it seems logical that the empathic level of the service personnel during the core of the service delivery has a higher priority than during the wait before the real service delivery.

Consumers, who knew why they must wait, have higher *overall consumer satisfaction* than consumers to whom the reason for waiting was not explained. No other waiting-related variables had an impact on overall consumer satisfaction.

4.2. Waiting experience variables

Contrary to the research of Taylor (1995), *occupied time* has only a limited influence on empathy in our field study, while Taylor (1995) found influence on tangibles, reliability and responsiveness. In many medical waiting rooms, service personnel tries to distract consumers attention from the upcoming activity, perhaps to avoid that the consumer is reminded to what is about to occur, which might heighten fears and hence make the wait situation more uncomfortable (Maister, 1985). When consumers' time was filled during the waiting, our results show that only evaluations of empathy were higher, which suggests that consumers attribute the positive effect of the distraction to the empathy of the service personnel.

Attributions to why the waiting is necessary (Folkes, Koletsky and Graham, 1987; Taylor and Fullerton, 2000) are consumers' assessments but can be influenced by the service provider. Past research found perceived service provider control over a delay to have a negative impact on service evaluations (Folkes, 1984; Bitner, 1990; Taylor, 1995). Evaluations of wait satisfaction, tangibles, reliability, empathy and overall consumer satisfaction were lower for those who felt that the service provider had a high degree of control over the delay. These results follow logically from how these dimensions are defined: the more control the service provider has over the delay, the more the consumer will perceive that the service is not being performed reliably or promptly and the less trust the consumer will have in the service provider. The service provider can not only be perceived as having control about the delay itself but also has control over some of the waiting conditions, i.e. if the consumer is informed about the waiting and about the causes of the wait. Known and explained waiting can only be controlled by the service provider, not by the consumer. Our study shows that *information about the fact that consumers have to wait* increase the perception of tangibles. Maister (1985) state that when a patient in a waiting room is told that the doctor will be delayed, he experiences an initial annoyance but then relaxes into an acceptance of the inevitability of the wait. However if the patient is not informed about the wait, he spends the whole time in a state of nervous anticipation, unable to fill his waiting time with other activities as reading for example.

An important contribution of our study is to provide field evidence of the relationship between waiting experience and service evaluations, more particularly the highly significant effect of *providing information about the cause of waiting* on service evaluations. Several authors have revealed the importance of explaining the cause of waiting, but no empirical evidence has been reported until now. We also found support for Maister's (1985) original proposition that if the consumer does not know the reasons for waiting, the duration will seem to be longer than when the reason for waiting is known. Explaining the reasons still has a main effect on the perception of reliability, even after introducing subjective waiting time as a covariate. It is also an interesting finding that in line with previous research waiting experience has an important impact on the perception of reliability. This finding is significant, because reliability is generally considered as the most important service quality dimension.

356 of the 650 consumers reported that they waited alone, although there is no real *solo wait* in the studied outpatient clinics; the waiting rooms are designed to let consumers waiting for different physicians in one room. We did not find any effect of solo wait on consumer service evaluation in our study. Maister (1985) stressed the importance of a sense of group waiting to experience the comfort of waiting in group. Our results suggest that there is no real sense of group waiting in the studied outpatient clinics possibly because consumers are waiting for different service providers or the patients do not feel 'involved' in the group.

Some researchers have argued that both *objective and subjective waiting times* can influence the evaluations of services (Hornik, 1984; Taylor, 1995). Previous experimental research found that delays are negatively related to overall service evaluations (Clemmer and Schneider, 1989; Katz et al., 1991; Taylor, 1994; 1995). Waiting in some situations is unavoidable. In the present study, we controlled for the effect of objective waiting time by including it as covariate in the analyses. Since an outpatient clinic environment can influence the perception of objective waiting time (Katz et al., 1991; Kumar et al., 1997), we also included subjective waiting time as a covariate. The results show that subjective waiting time better explains the variance of the perceptions of different service quality dimensions than does objective waiting

time. This is in accordance with Pruyn and Smidts (1998), who found that the effect of objective waiting time on the appraisal of the waiting experience is mediated by subjective waiting time.

6.1. Limitations and future research

The results of this study improve the understanding of the impact of waiting on service evaluations. The study was, however, subject to certain limitations. Most obviously, it focused on one type of waiting—pre-process waiting—and although it is expected that the results would be similar for queue waiting, this cannot be generalised from the present study alone, and thus requires further research.

It is impossible in a single study of this size to consider all the concepts relevant to the psychology of waiting. The waiting-related variables we studied explain at most 23% (tangibles) of the variability of the service quality dimensions. In other research (Chebat et al. 1995; Cameron et al., 2003), mood was found to have a significant impact on service evaluations. Future research should be directed at including other aspects of the psychology of waiting, such as mood, anxiety, the equity of the waiting, and the value of the service.

We also used only objective and subjective waiting times as covariates in the analyses. Other covariate factors with respect to waiting include the design of the waiting environment and the presence of service employees during the wait. Moreover, this study does not account for all the strategies that can influence waiting time experience, such as service recovery approaches and mood enhancing strategies. There are also no expected or acceptable waiting times incorporated in the model we tested.

The present study assumed that consumers perceive service quality in the five dimensions proposed in Parasuraman et al. (1988). We chose to use the perception of service quality as the predictor of the service quality concept (Cronin and Taylor, 1992; Oliver, 1993; Teas, 1993; Woodruff et al., 1983). Other authors have claimed that the incorporation of expectations is necessary to measure service quality (Parasuraman et al., 1988; Carman, 1990). It would be interesting to study whether

the sole use of perceptions is more acceptable than the expectations–perceptions approach.

The present study was conducted in only one university hospital. A prime motivation for studying outpatient clinics of one hospital was to limit the variance of factors related to the specific hospital environment. Nevertheless, we found that even in the same environment, some variance occurs due to differences in wait management practices in the different outpatient clinics. Future research should investigate different hospitals to determine whether similar relationships can be found.

Furthermore, with a higher amount of data, multilevel analysis to test the effect of individual and group level influences could be conducted. We expect that the influences of waiting variables on service evaluations can be on an individual level (differences between consumers) and on the group level (differences between outpatient clinics).

6.2. Managerial implications

According to our findings, the psychology of waiting plays a vital role in service evaluation by consumers. The conclusions drawn from this research are therefore important for organisations that want to manage their waiting times to influence the service evaluations of their consumers. Our research has pointed out a number of important factors of the service quality dimensions that can be directly or indirectly influenced by an organisation.

The waiting experience variables we studied exert their strongest influence on the tangible and reliability aspects of outpatient clinics. The management of waiting time—either by operations management techniques or a psychological approach to waiting—appears to have most influence on tangibles and reliability, and less on responsiveness, assurance and empathy. The perception of tangibility and reliability best differentiates between the outpatient clinics; the studied waiting experience variables are most reflected in these service quality dimensions.

A second significant managerial conclusion is that explaining to consumers why they must wait is the single most effective waiting perception management technique

in relation to consumer perception of reliability. Further research should clarify whether this finding can be supported in other service environments. The single best piece of advice that we can currently offer managers of outpatient clinics is *to give consumers information about the reasons why they must wait*. Explaining the reasons why waiting is necessary goes one step further than just giving information about the expected duration of the waiting. More insights into how and when to communicate information about waiting, and the impact of this on consumer perceptions of reliability, is another way of extending this research.

From a managerial point of view, a powerful feature of this study was the participation of multiple comparable service units (outpatient clinics). This allows management of these outpatient clinics to compare their situation with that in the other outpatient clinics. The problem with waiting and service quality is that there are no absolute norms of what constitutes good or bad practice. Therefore, managers judge their relative performance by comparing or benchmarking their situation with other similar service units.

This study has shown that subjective waiting time is a better covariate in explaining the variance of the Servqual dimensions than the objective waiting time. This means that the psychological approach of dealing with waiting times is at least as important as the operations management approaches. Give consumers a reasonable explanation for the experienced waiting time and they will regard your service more positively in terms of reliability and tangibles.

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Chapter 5

Employee-related antecedents of customer satisfaction: how does stress and job satisfaction of service employees influence customer satisfaction?

**EMPLOYEE-RELATED ANTECEDENTS OF CUSTOMER SATISFACTION:
HOW DOES STRESS AND JOB SATISFACTION OF SERVICE
EMPLOYEES INFLUENCE CUSTOMER SATISFACTION?**

Stefanie De Man¹⁴, Paul Gemmel¹⁵, Peter Vlerick¹⁶, Rudi Dierckx¹⁷

¹⁴ ICM doctoral fellow, Vlerick Leuven Ghent Management School, Belgium

¹⁵ Faculty of Economics and Business Administration, Ghent University and Vlerick Leuven Ghent Management School, Belgium

¹⁶ Faculty of Psychology and Educational Sciences, Ghent University, Belgium

¹⁷ Division of Nuclear Medicine, Ghent University Hospital, Belgium

EMPLOYEE-RELATED ANTECEDENTS OF CUSTOMER SATISFACTION: HOW DOES STRESS AND JOB SATISFACTION OF SERVICE EMPLOYEES INFLUENCE CUSTOMER SATISFACTION?

Abstract

To deliver high levels of customer satisfaction, service organizations must focus on organizational elements that produce customer satisfaction. The authors examine how job stress (quantitative and qualitative job demands), empowerment and job satisfaction influence customer satisfaction in outpatient clinics. Quantitative job demands are psychological and physical job demands, qualitative job demands are role conflict and role ambiguity.

Contrary to prior research, we observed a strong negative influence of job satisfaction on overall customer satisfaction. While satisfied customers have a positive impact on job satisfaction of service employees, satisfied employees do not lead to more satisfied customers. In the research model, direct employee-related antecedents of job satisfaction are psychological job demands and self-efficacy. Role ambiguity and empowerment have indirect effects on job satisfaction. By examining the antecedents of overall customer satisfaction, our empirical results show direct effects of role conflict, role ambiguity, empowerment, and customer orientation but job satisfaction has the strongest direct negative effect on overall customer satisfaction.

Keywords: customer satisfaction, job stressors, job satisfaction

EMPLOYEE-RELATED ANTECEDENTS OF CUSTOMER SATISFACTION: HOW DOES STRESS AND JOB SATISFACTION OF SERVICE EMPLOYEES INFLUENCE CUSTOMER SATISFACTION?

Introduction

Customer focused management is nowadays of strategic importance for service organizations in profit and social profit sector (Schneider and Bowen, 1995; Zeithaml and Bitner, 2003). Customer satisfaction with services depends at least on how well service employees perform in their job (Norrman, 1984). When organizations aim at improving their services and satisfying their customers, knowledge of factors affecting frontline employee service behavior is crucial (e.g. Bitner, 1990; Bitner, Booms, and Mohr, 1994; Hartline, Maxham, and McKee, 2000; Lau, 2000). In the present article, we focus on the employee-related antecedents of overall customer satisfaction.

Many services management scholars have stressed the importance of human resource management for improving service quality perceptions and customer satisfaction (e.g. Bateson, 1995; Bowen, Schneider, and Kim, 2000; Hartline and Ferrell, 1996; Kelliher and Perrett, 2001; Kelliher and Riley, 2002; Lau, 2000; Mattila and Enz, 2002). Services management research has largely centered on identifying the effects of organizational variables on employee responses (Babin and Boles, 1996; Brown and Peterson, 1994; Weatherly and Tansik, 1993; Yoon, Beatty, and Suh, 2001) and the effects of employee's attitudes on service quality (Bitner, 1990; Bitner et al., 1994; Schneider and Bowen, 1985; Yoon et al., 2001). The service literature seems to ignore the direct or indirect impact of job stress on overall customer satisfaction. It is noticeable that only one single study reported the influence of organizational problems, time pressure, work disruptions, task control, and time control on customer satisfaction (i.e. Dormann and Kaiser, 2002).

Job stress refers to an employee's perception of imbalance between the job demands made and the available resources, such as empowerment, to meet those job demands, which can lead to a feeling of doubt about the ability to cope. On a theoretical level, quantitative and qualitative job demands can be distinguished

(Janssen, 2001). “Quantitative job demands refer to the degree to which employees are required to work fast and hard and have much work to do in a short time, or permanently have a great deal of work to do; qualitative job demands refer to having to deal with role ambiguity and/or with conflicting role demands (cf. Ganster & Fusilier, 1989; Karasek, 1979; Katz & Kahn, 1966; Rabinowitz & Stumpf, 1987).” (Janssen, 2001, p. 1040). To our best knowledge, no previous study incorporated both quantitative and qualitative job demands.

This study investigates how quantitative and qualitative job stressors influence customer satisfaction. The job demands-control model of Karasek (1979) suggests that high job demands and low job control prevent service contact-personnel from excellent service behavior. Most empirical studies about the job demands-control model are focused on health and well being outcomes. In this study, we focus on a managerial outcome: *overall customer satisfaction*. Customer satisfaction is cited to represent the most direct performance indicator when organizations evaluate their customer-oriented strategy (Dormann and Kaiser, 2002). Based on a review of the literature, we chose to incorporate additionally three frontline employee responses (self-efficacy, customer orientation and job satisfaction) in our model. These responses were chosen because they are hypothesized to positively affect the ability of frontline employees to serve customers in a manner that enhances customer satisfaction (Hartline and Ferrell, 1996; Schneider, Brief, and Guzzo, 1996). The importance of job satisfaction to merit satisfied customers, can be recognized in the satisfaction mirror (Heskett, Sasser, and Schlesinger, 1997). The satisfaction mirror suggests that employee satisfaction is reflected in terms of customer satisfaction. Conversely, the satisfaction mirror suggests that failure to satisfy employees will eventually be reflected in customer dissatisfaction. The satisfaction mirror also states that customer satisfaction reflects on employee job satisfaction.

The use of both customer and employee data is one of the strengths of the current investigation because it offers multiple viewpoints from which to examine the service encounter and method variance can be controlled by obtaining where possible data from an external source (Mattila and Enz, 2002).

Model

In order to theoretically derive those employee-related antecedents that affect customer satisfaction, one has to start with the demands that are imposed on service employees by their organizations and/or their customers, which also result in service employees' satisfaction or dissatisfaction. Therefore, the first objective of our research model involves identifying the employee-related antecedents of job satisfaction. Based on the job demands-control model, we limit us to the effects of job demands and empowerment on job satisfaction. We extend the quantitative job demands of the job-demands control model with the qualitative job demands of role theory (role conflict and role ambiguity). Bandura's (1977) social learning theory defines self-efficacy as the belief of the service employee in the ability to perform his job tasks, which is important for employees' job satisfaction. Therefore, we model self-efficacy as mediator on job satisfaction. Our second research objective is to determine which employee-related antecedents impact overall customer satisfaction. We examine the impact of job stress and empowerment as direct antecedents and customer orientation as mediator on customer satisfaction. Our third objective, a corollary to the first two, is to examine the interesting relationship between job satisfaction and overall customer satisfaction.

The proposed research model of employee-related antecedents affecting overall customer satisfaction is shown in Figure 1. Job demands and empowerment are modeled as exogenous variables in the model. This is appropriate because the purpose of this study is to examine employee-related antecedents of overall customer satisfaction.

We test this model empirically in a health care environment, more specific in outpatient clinics. Health care professionals are very suitable to test the impact of service employee behavior on consumers' behavior because there is a variety of health care sectors and different specialties. Health care professionals are a relatively heterogeneous group as far as exposure to work pressure is concerned. The positive effect of the heterogeneity is added with the advantage of having a small variance regarding social class in health care work. The small variance regarding social class in health care work results in the fact that socio-economic status will not act as a

confounder (De Jonge, et al., 1999; Ganster and Fusilier, 1989; Fox, Dwyer, and Ganster, 1993; Sheffield, Dobbie and Carroll, 1994).

The following section discusses the model's constructs and relevant hypotheses.

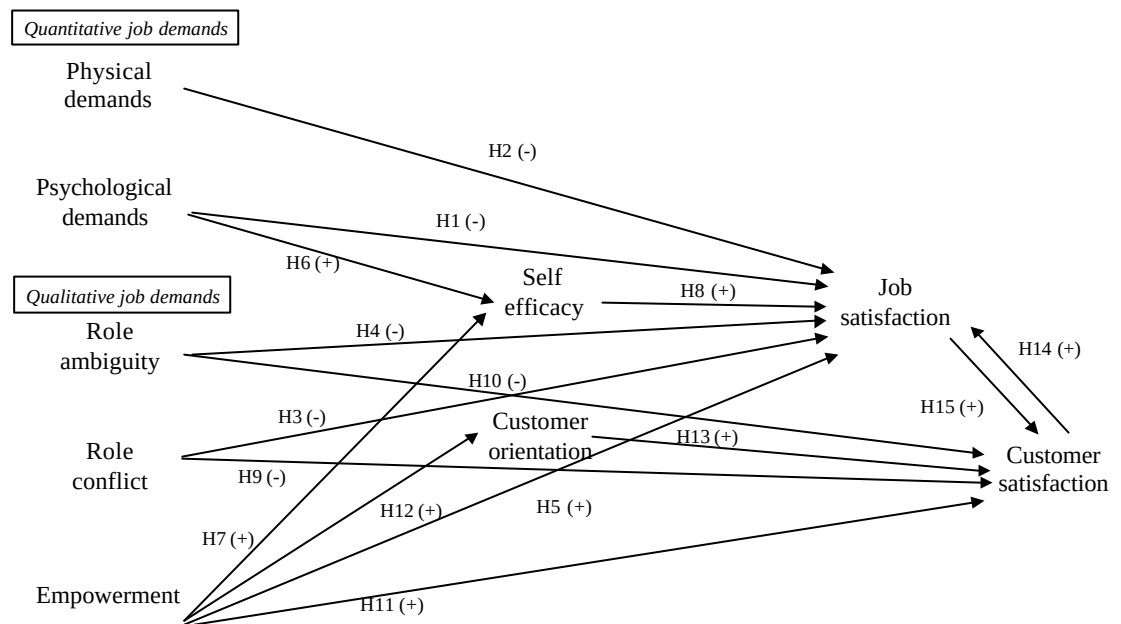


Figure 1. Conceptual model.

Employee-related antecedents of job satisfaction

Job stress and empowerment

Quantitative job demands. Based on the multifaceted nature of job demands in health care organizations (de Jonge, Van Breukelen, Landeweerd, and Nijhuis, 1999), we distinguish quantitative job demands into psychological and physical job demands. Cognitive or psychological job demands can be defined as the high pressure of time, high working pace, difficult and mentally exhausting work and high

workload (de Jonge et al., 1999). Physical job demands incorporate demands of a physical nature as constrained standing and carrying heavy loads.

Previous research indicates that quantitative job demands reduce employees' job satisfaction (cf. Noblet, Rodwell, and McWilliams, 2001). In health care, several authors found a negative impact of psychological job demands on job satisfaction (Williams, Konrad, Scheckler, Pathman, Linzer, McMurray, Gerrity, and Schwartz 2001; Dollard, Winefield, Winefield, and de Jonge, 2000; de Jonge et al., 1999). Empirical research about the influence of physical job demands on job satisfaction has no consistent results: de Jonge et al. (1999) detected a positive relationship between physical demands and job satisfaction, while De Troyer (2000) found a negative relationship between physical demands and job satisfaction. De Jonge et al. (1999) do not provide any explanation for this positive relationship. De Troyer (2000) states that in health care the high physical work conditions result in a rather low job satisfaction level. Health care professionals are confronted with physically demanding tasks as the handling of heavy loads is often involved (moving, repositioning and lifting patients), but also movements and postures that are expected in many work situations. Moreover, in many occasions, the work environment is not well adapted. Hence, we propose the following hypotheses:

Hypothesis 1: The higher the psychological job demands, the lower the job satisfaction

Hypothesis 2: The higher the physical job demands, the lower the job satisfaction.

Qualitative job demands. Role stress jeopardizes efforts of service employees to perform their jobs (Boles and Babin, 1996; Brown and Peterson, 1993; Wetzels, de Ruyter, and Lemmink, 1999). Role stress generally is conceptualized using two constructs: role conflict and role ambiguity (Rizzo, House, and Lirtzman, 1970). Role conflict is the incompatibility between one or more roles within an employee's role set, such that fulfilling one role would make fulfilling the others more difficult (cf. Weatherly and Tansik, 1993; Hartline and Ferrell, 1996). By their boundary-spanning role, service employees, are stuck in the middle to fulfil expectations of customers,

supervisors, co-workers and the organization. Role ambiguity occurs when an employee 'lacks salient information needed to effectively enact his or her role' (Singh, 1993, p.12).

Role conflict and role ambiguity are often implicated as a determinant of job satisfaction but there is no consistent support in empirical research (e.g. Siguaw, Brown, and Widing, 1994; for an overview see Nygaard and Dahlstrom, 2002). Comparable to other service employees, health care employees are confronted with competing demands from customers, colleagues, and the organization and without clear information about how to perform, they can experience lower job satisfaction. Accordingly, we hypothesize the following:

Hypothesis 3: The higher the role conflict, the lower the job satisfaction.

Hypothesis 4: The higher the role ambiguity, the lower the job satisfaction.

Empowerment. Employees want work that allows them to use their knowledge and skills effectively, and to produce something that they can be proud of that has social relevance (Bruce and Blackburn, 1992). In this respect, frontline employees desire tools and authority as a frontline employee to serve the customer (Zeithaml and Bitner, 2003). Empowerment and job control both refer to the degree that employees are allowed to make decisions about how to accomplish job tasks.

Empowered employees should report greater job satisfaction than employees who were not empowered. The employee's control over the work environment has been acknowledged as contributing to job satisfaction and beneficial effects of empowerment on job satisfaction are demonstrated by Beehr, Glaser, Canali, and Wallwey, 2001, De Jonge et al., (1999), Dollard et al., (2000), Dwyer and Ganster, (1991), Furnham, 1992, McLaney and Hurrell (1998), Noblet et al., (2001), Peccei and Rosenthal (2001), Sargent and Terry (1998). Specifically in health care, Laschinger, Finegan, and Shamian (2004) found that more empowered employees are more satisfied. Accordingly, we propose the following hypothesis:

Hypothesis 5: The higher the empowerment, the higher the job satisfaction

Self-efficacy as mediator

Based on the findings of Hartline and Ferrell (1996), we incorporate the self-efficacy construct in the research model. Self-efficacy is a feeling of competence to perform the job adequately (Hartline and Ferrell, 1996; Bandura, 1977). On the one hand previous research indicate that job demands and empowerment influence self-efficacy, on the other hand there is support for the positive effect of self-efficacy on job satisfaction.

Quantitative job demands and empowerment. The additive active learning hypothesis state that jobs combining high demands and high empowerment would provide the most sense of competence (i.e. self-efficacy), productivity and accomplishment (de Jonge and Kompier, 1997). Empirical evidence for the additive active learning hypothesis found that employees reporting high job demands report the highest levels of self-efficacy and show that high demands are not necessarily harmful if they are accompanied by congruent levels of empowerment (Dollard et al., 2000). In practice, empowered employees view themselves as more effective in their work and have a high sense of self-efficacy (Conger and Kanungo, 1988; Ford and Fotler, 1995; Quinn and Spreitzer, 1997; Siegall and Gardner, 2000). A high level of empowerment as perceived by the health care employee sends a message that management has confidence in his capability and therefore allows the service employee to carry out the job in the way he wishes to. This message has a positive effect on the service employee's efficacy judgement. Therefore, we hypothesize:

Hypothesis 6: The higher the psychological job demands, the higher the self-efficacy.

Hypothesis 7: The higher the empowerment, the higher the self-efficacy

Self-efficacy. Feelings of competence and confidence that accompany self-efficacy make the job for service employees more enjoyable. Empirical studies confirm that

self-efficacy has a positive relationship with job satisfaction (McDonnald and Siegall, 1992; Locke and Latham, 1990; Schwoerer and May, 1996). This leads to following hypothesis:

Hypothesis 8: The higher the self-efficacy, the higher the job satisfaction.

Employee-related antecedents of customer satisfaction

Job stress and empowerment

Qualitative job demands. To our best knowledge, no prior studies have considered the direct influence of role conflict and role ambiguity on customer satisfaction. The lack of information about prioritizing tasks in function of the different parties (organization, supervisors, customers) and the lack of information how to perform the job in the right way probably create greater difficulty for service employees to understand and meet customers' expectations. Therefore, we hypothesize role conflict and role ambiguity have a negative influence on customer satisfaction.

Hypothesis 9: The higher the role conflict, the lower the customer satisfaction.

Hypothesis 10: The higher the role ambiguity, the lower the customer satisfaction.

Empowerment. Empowered employees often feel more confident in their ability to contribute to the firm's success (Kelley, Longefellow, and Malehom, 1996; Hartline et al., 2000). Service employees' control over the service situation was found to be positively related to customer satisfaction (Bateson, 1995; Stewart, Carson, and Cardy, 1996; Yagil and Gal, 2002; Yagil, 2002) and perceived customer service quality (Hartline and Ferrell, 1996). Hence, we propose the following hypothesis:

Hypothesis 11: The higher the empowerment, the higher the customer satisfaction

Customer orientation as mediator

Customer orientation is a behavior in which employees are adapting to the needs of the customer. The importance of customer orientation in services lets us

incorporate customer orientation in the research model. On the one hand previous research indicate that empowerment influences customer orientation, on the other hand there is support for the positive effect of customer orientation on customer satisfaction.

Empowerment. Control over the service process increases the employee's ability to satisfy the customers' need promptly and flexibly (Bateson, 1995). Frontline employees should have the power or latitude to adapt their behaviors to the demands of each and every service encounter (Chebat and Kolias, 2000). Empowerment as freedom to structure work tasks, prioritization of tasks, and time management all contribute to a more flexible job (Gosnell, 2000). Therefore, we hypothesize:

Hypothesis 12: The higher the empowerment, the higher the customer orientation

Customer orientation. High customer orientation or high client adaptability, also referred to as high flexibility in service employee behavior (Zeithaml and Bitner, 2003) reflects the ability of contact employees to adjust their behavior to the interpersonal demands of the service encounter (Bearden, et al., 1998; Hartline and Ferrell, 1996). Customer orientation can be described as a continuum ranging from conformity to an established script, in which employees approach each customer the same way, to service personalization in which employees must adapt to serve individual customers (Solomon, Suprenant, Czepiel, and Gutman, 1985). Adaptive employee behavior to customer needs is an important determinant of customer satisfaction (Hartline and Ferrell, 1996; Bitner, 1990, Bitner et al., 1994). Therefore, we hypothesize:

Hypothesis 13: The higher the customer orientation, the higher the customer satisfaction.

Relationship between job satisfaction and customer satisfaction

Job satisfaction. In the service profit chain, Heskett, Loveman, Sasser, Schlesinger (1994) and Heskett et al. (1997) propose that satisfied employees create customer satisfaction because they enjoy the quality of working life provided by the service organization. This is because services are intangible social events where employee attitudes become a prime source of cues available to customers seeking to evaluate a service (Mills, 1986; Schneider and Bowen, 1995; Moshavi and Terborg, 2002). The effects of a positive service encounter are shown in research that has suggested positive relationships between job satisfaction and customer service evaluations (Hallowell, Schlesinger, and Zornitsky, 1996; Heskett et al., 1994, 1997; Moshavi and Terborg, 2002; Rust, Stewart, and Miller, 1996; Schneider, 1980; Schneider and Bowen, 1985; Schneider et al., 1995, 1996; Silvestro and Cross, 2000; Zeithaml, Berry, and Parasuraman, 1996). Specifically in health care, Atkins, Marshal, and Javalgi (1996) found a positive but non-significant effect of job satisfaction on customer satisfaction. This suggests that organizations with satisfied employees have satisfied customers. Therefore, we hypothesize that customers report higher satisfaction when the employees who serve them are more satisfied at work.

Hypothesis 14: The higher the job satisfaction, the higher the customer satisfaction.

Customer satisfaction. In practice, several high performing organizations give employees the latitude to dismiss or fire customers (Heskett et al., 1997). Research should be addressed to test the influence of difficult, rude, troublesome or dissatisfied customers on job satisfaction of service employees. In this respect, we hypothesize that working with happy and satisfied customers must have a positive influence on service employees' job satisfaction.

Hypothesis 15: The higher the customer satisfaction, the higher the job satisfaction.

Methodology

Research design

Our empirical study was conducted in 9 outpatient clinics of a university hospital. A package containing the employee questionnaire, a return envelope, and a cover letter was given to the 249 employees (physicians, nurses and administrative personnel) of the 9 outpatient clinics. 138 employees completed the questionnaire (response rate: 55.4%), which resulted in 129 usable employee questionnaires. 31.4 % of the sample was male, mean age was 39.18 (s.d.=11.41).

1346 patients, visiting one of the outpatient clinics within one week chosen at random in October-December 2002, received a patient questionnaire. Individual data of 654 patients (response rate: 48.6, 34.2% male, mean age 39.67, s.d.= 19.63) of customer satisfaction were aggregated at outpatient clinic level (average of all outpatient clinic patients' scores). Aggregation of customer data was necessary because in an outpatient clinic setting one-to-one service encounters are non-existing; consumers are confronted with more than one service employee (e.g. nurse, doctor, and administrative personnel). Aggregation of individuals' perceptions is appropriate if the grouping makes conceptual sense given the researcher's objective (Schmitt and Allscheid, 1995; Schneider, 1990). Aggregating customer satisfaction data within the outpatient clinics is based on a belief in the high impact of situational variables of the outpatient clinic on customer satisfaction (Douglas and Turley, 2002). Each individual service employee score on job demands, empowerment, self-efficacy, customer orientation and job satisfaction is linked to the mean value of customer satisfaction at outpatient clinic level.

Measures

To remain consistent with previous research, the measures were selected from previous studies in marketing, management, and psychology. Coefficient alphas, means and standard deviations can be found in Table 1. It should be noted that all measurement instruments used had an alpha coefficient equal to or higher than .73.

Psychological job demands, *physical job demands* and *empowerment* were measured based on de Jonge et al. (1999). These scales have been well validated in

Dutch samples of health care professionals (e.g. de Jonge, Janssens, & Van Breukelen, 1996; De Rijk, LeBlanc, Schaufeli, & de Jonge, 1998; de Jonge, Landeweerd, & Van Breukelen, 1994). The psychological job demands scale includes eight items containing a wide range of demanding aspects of the job, such as working under time pressure, working hard, and job complexity. An example item is: 'In the unit where I work, work is carried out under pressure of time'. The physical job demand scale includes seven items about carrying heavy loads, constrained standing, to stoop deeply and to carry shoulder high. An example item is: 'In my work I have to carry heavy loads'. The empowerment scale includes nine questions about the employee's opportunity or freedom, inherent in the job, to determine a variety of task elements, like the method of working, the pace of work and the work goals. An example item is: 'My work allows me to take many decisions myself'. A 5 point Likert scale is adopted for each of these scales.

Role conflict and role ambiguity were measured using Rizzo et al.'s (1970) six and eight-item scales, respectively. These scales have been used extensively. The respondent indicated the frequency of encountering the situation described by each item using a scale anchored by always (7) and never (1). The reliability coefficient was .84 for role conflict and .81 for role ambiguity.

Self-efficacy was assessed by the scale of Teeuw, Schwarzer & Jerusalem (1994). The generalized self-efficacy refers to one's general sense of competence and effectiveness, but may have been interpreted by the respondent in a job context. Examples of items included are 'I always manage to solve difficult problems if I try hard enough' and 'I am confident that I could deal efficiently with unexpected events'.

Customer orientation was measured by a Dutch adaptation of the scale of Hartline and Ferrell (1996). Customer orientation was operationalized as the ability of customer contact employees to adjust their behavior to the interpersonal demands of the service encounter. Examples of items included are 'I am very sensitive to the needs of my customers' and 'I like to experiment with different customer approaches'.

Job satisfaction was assessed by a single item (i.e. ‘I am satisfied with my present job’). There is considerable precedent of using a global index of overall job satisfaction as a valid measure of general job satisfaction (de Jonge, Dormann, Janssen, Dollard, Landeweerd, and Nijhuis 2001; Wanous, Reichers, and Hudy, 1997).

Customer satisfaction was measured by a single item: ‘In general, how satisfied are you with the outpatient clinic?’ (e.g. Mittal, Ross, and Baldasare, 1998). All items of the self-efficacy and the customer orientation scale and the items measuring job satisfaction and customer satisfaction were measured with a 7 point Likert scale.

Table 1. Scales and dimensions used for the statistical analysis.

Scale/dimension	Number of items	Response Scale	a	Mean	SD	Source
Psychological demands	8	1-5	.82	3.11	.57	de Jonge et al., 1999
Physical demands	7	1-5	.82	2.08	.75	de Jonge et al., 1999
Empowerment	9	1-5	.82	3.87	.68	de Jonge et al., 1999
Role conflict	8	1-7	.84	3.21	1.05	Rizzo et al., 1970
Role ambiguity	6	1-7	.81	2.52	.84	Rizzo et al., 1970
Self-efficacy	10	1-7	.90	5.16	.73	Teeuw, Schwarzer, Jerusalem, 1994
Customer orientation	10	1-7	.73	5.06	.69	Hartline and Ferrell, 1996
Job satisfaction	1	1-7	-	5.67	.86	‘How satisfied are you with your job in general?’
Customer satisfaction	1	1-7	-	5.22	.71	‘In general, how satisfied are you with the outpatient clinic?’

Test for common method variance bias

Two constructs may share variance because they are measured by a common method. To determine the presence of common method variance bias among the employee's self-reported variables, a Harman's (1967) one factor test was performed following the approach outlined by previous researchers (Podsakoff, Todor, Grover, and Huber, 1984; Mattila and Enz, 2002). All personnel self-reported variables were entered into a principal components factor analysis with varimax analysis. Common method variance is present if a single factor emerges from the factor analysis or one 'general' factor accounts for more than 50% of the covariation in the variables. Our analysis revealed a 16-factor structure with each factor accounting for less than 50% of the covariation. Thus no general factor was apparent. Although this analysis does not completely rule out the possibility of common method bias, it does provide some post hoc statistical support for absence of such bias in the findings presented in the result section. Finally, the use of two different sources for data gathering –employees and patients- further reduce the likelihood for common method bias in this study. One strength of the current study is its reliance on patient satisfaction data from the customers themselves.

Data analysis

To evaluate the effects of job stressors and empowerment on job satisfaction and customer satisfaction, structural equation modeling (SEM) was chosen as an appropriate tool for statistical analysis. This approach allows for a comprehensive test of the model as shown in Figure 1. All computations were performed using LISREL 8.5 (Jöreskog and Sörbom, 2001), with covariances as input and using maximum likelihood estimations. Parametric assumptions were fulfilled, with the exception of the multivariate normality distribution of the latent variables (the reason why we opt for maximum likelihood estimations).

Because of the large number of items used to operationalize all the variables in our model, simultaneous consideration of all observed variables (i.e. items) would result in unreliable parameter estimates and insufficient power (Bentler and Chou, 1987; de Jonge et al., 2001; Jaccard & Wan, 1996). Therefore, each of the

components in the model was included in the structural equation analyses as a latent variable. In other words, the covariance structure model was simplified by assuming that the observed and latent variables were identical (each construct had only one operationalization). In accordance to Hair, Anderson, Tatham, and Black. (1998), we used the mean scale score for each construct as input for model testing. As there also was no theoretical reason to assume that these variables should be unrelated to each other, they were allowed to covary in the model.

Based on Hoyle and Panter's (1998) recommendations, several criteria were used to evaluate fit of the model. These include fit indices as the Chi-square (χ^2), the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), and the Root Mean Square Error of Approximation (RMSEA). The χ^2 is interpreted as the test of the difference between the hypothesized model and the just-identified version of the model. Low nonsignificant values are desired. However, the χ^2 is very sensitive to sample size, thus, in a model with a relatively large sample size, the null hypothesis is expected to be rejected almost all of the time. The GFI indicates the proportion of the observed covariances explained by the model-implied covariances and is analogous to R^2 . The RMSEA is the standardized summary of the average covariance residuals and is thus a measure of the lack of fit between the data and the model. Low values (between 0 and .08) indicate a good fitting model.

Results

To test for multicollinearity, Pearson correlations between the variables were computed (see Table 2) prior to the LISREL analyses. The correlations between the variables ranged from .191 to .464. The highest VIF (variance inflation factor) is 1.274 for role ambiguity, which let us conclude that the effect of multicollinearity is negligible, since Hair et al. (1998) suggest a cutoff value of 10.00 as an acceptable VIF.

We accomplished hypotheses testing by examining the completely standardized parameter estimates and their *t* values. Estimating the hypothesized model produced following statistics: $\chi^2 = 38.04$ ($p = .0008$), goodness-of-fit index (GFI) = .94, adjusted goodness-of-fit index (AGFI) = .75, comparative fit index (CFI) = .88, parsimony normed index (PNFI) = .26, and root mean square error of approximation (RMSEA) = .141.

The structural parameter estimates from the hypothesized model are reported in Table 3. One-tailed tests of significance were used to determine the significance of each path coefficient. Inspection of the univariate Lagrangian multiplier test (or in Lisrel the Modification Index test) suggested an additional relationship in our model (Bollen, 1989). We found that self-efficacy mediated the relationship between role ambiguity and job satisfaction, instead of a direct effect of role ambiguity on job satisfaction, which was suggested in the hypothesized model. We had to delete the relation between role ambiguity and job satisfaction in a third step of changes of the hypothesized model. In the second step, we deleted the non-significant path from empowerment to job satisfaction. This can be theoretically justified by the indirect effect of empowerment on job satisfaction through the self-efficacy construct. As mentioned before, to optimize model fit, we finally removed the non-significant path from role ambiguity to job satisfaction. Deleting these paths did not significantly affect the fit and resulted in a more parsimonious model $\chi^2 = 21.59$ ($p = .04237$), goodness-of-fit index (GFI) = .96, adjusted goodness-of-fit index (AGFI) = .86, comparative fit index (CFI) = .95, parsimony normed index (PNFI) = .30 and root mean square error of approximation (RMSEA) = .081.

Table 2. Significant correlations (at .01 level) among measures of psychological and physical job demands, role conflict, role ambiguity, empowerment, self-efficacy, customer orientation, job satisfaction and customer satisfaction.

Variable	1	2	3	4	5	6	7	8	9
1. Psychological job demands		-	.445	-	.271	-	-	-.325	-
2. Physical job demands			.313		-	-	-	-	.376
3. Role conflict				-.346	-	-	-	-.461	.265
4. Role ambiguity					-	.425	.191*	.464	-
5. Empowerment						.324	.405	.234	.379
6. Self-efficacy							.301	.283	-
7. Customer orientation								.281	-
8. Job satisfaction									-
9. Customer satisfaction									

* significant at .05 level

Table 3. Structural parameter estimates: hypothesized and final path models (n=129)

Path	Hypothesized model			Final model		Hypothesis testing
	Hypothesis	Coefficient	t-value	Coefficient	t-value	
Psychological demands -> job satisfaction	H1 (-)	-.37	-2.32	-.36	-2.00	Failed to reject
Physical demands -> job satisfaction	H2 (-)	-.086	-0.78	-.086	-.70	Rejected
Role conflict -> job satisfaction	H3 (-)	-.018	-1.66	-.17	-1.46	Rejected
Role ambiguity -> job satisfaction	H4 (-)	-.094	-0.77			
Empowerment -> job satisfaction	H5 (+)	.085	0.53			
Psychological demands -> self-efficacy	H6 (+)	.068	0.64	.12	1.19	Rejected
Empowerment -> self-efficacy	H7 (+)	.44	4.84	.32	3.47	Failed to reject
Self-efficacy -> job satisfaction	H8 (+)	.31	2.46	.36	2.99	Failed to reject
Role conflict -> customer satisfaction	H9 (-)	-.54	-2.34	-.68	-2.80	Failed to reject
Role ambiguity -> customer satisfaction	H10 (-)	-.51	-2.57	-.62	-2.70	Failed to reject
Empowerment -> customer satisfaction	H11 (+)	.52	2.03	.63	2.34	Failed to reject
Empowerment -> customer orientation	H 12 (+)	.25	2.72	.25	2.72	Failed to reject
Customer orientation -> customer satisfaction	H13 (+)	.56	2.74	.69	2.86	Failed to reject
Job satisfaction -> customer satisfaction	H14 (+)	-1.01	-1.96	-1.39	-2.68	Negative impact
Customer satisfaction -> job satisfaction	H15 (+)	.68	2.79	.86	4.21	Failed to reject
Role ambiguity -> self-efficacy				-.30	-4.17	Failed to reject

Employee-related antecedents of job satisfaction

Our results indicate that of the measured job stressors, only the quantitative psychological demands have a direct significant negative impact on job satisfaction (H1 supported, standardized path coefficient = $-.36$, t value = -2.00). Having higher physical demands is not associated with lower job satisfaction, which leads to the rejection of H2. Contrary to our expectations, psychological demands do not have a significant effect on self-efficacy (H6 rejected).

No significant effect of role conflict is found on job satisfaction (H3 rejected). We found a significant relationship we did not include in our conceptual model: role ambiguity has an indirect effect on job satisfaction via self-efficacy (standardized path coefficient role ambiguity – self-efficacy = $-.30$, t value = -4.17), instead of the imposed direct relationship between role ambiguity and job satisfaction (H4 rejected). Although it makes theoretically sense that role ambiguity influences self-efficacy, this effect is more or less empirically determined and will need to be cross-validated using additional samples (Silvia and MacCallum, 1988).

Empowerment affects job satisfaction only via self-efficacy (in support of H7, standardized path coefficient = $.32$, t value = 3.47 , and H8, standardized path coefficient = $.36$, t value = 2.99), but no direct effect is found on job satisfaction (H5 rejected).

Employee-related antecedents of customer satisfaction

We observed a significant impact on customer satisfaction of both qualitative job stressors, i.e. role conflict (H9, standardized path coefficient = $-.68$, t value = -2.80) and role ambiguity (H10, standardized path coefficient = $-.62$, t value = 2.70). Empowerment has a direct (H11, standardized path coefficient = $.63$, t value = 2.34) and indirect effect via customer orientation (H12, standardized path coefficient = $.25$, t value = 2.72 and H13, standardized path coefficient = $.69$, t value = 2.86) on customer satisfaction.

Relationship between job satisfaction and customer satisfaction

While the positive impact of customer satisfaction on job satisfaction is observed (H15, standardized path coefficient = .68, t value = 4.21), the reversed structural path indicated an unexpected negative impact of job satisfaction on customer satisfaction (H14, standardized path coefficient = -1.39, t value=-2.68).

Discussion

This aim of this study was to test a model that specifies possible employee-related antecedents of customer satisfaction. This study focuses on the importance of service employees as boundary spanners who interact with customers through service encounters. Little attention has been given in prior customer satisfaction research to the importance of service employee work stress, even though it can affect the responses of service employees and ultimately influence customer satisfaction. In the service encounter, employees are performers rather than simply workers, and their behavioral performance is customer satisfaction. The results in the preceding section suggest a nice fit of the data with the final model. All relationships with significant observed t-value are in the expected directions, except for the high *negative influence of job satisfaction on customer satisfaction*.

Relationship between job satisfaction and customer satisfaction

There are three plausible reasons for the negative relationship between job satisfaction and customer satisfaction. First, the satisfaction mirror, which suggests that happy employees spill over their satisfaction to their customers (Heskett et al., 1997), does not work appropriately in this case. Atkins et al. (1996) explain the non-significant but positive link between nurse satisfaction and patient satisfaction as patient satisfaction should be more dependent of the outcome than other aspects of the delivered service. Ellis, Gudergan and Johnson (2001) state that if the complexity of the service increases, the number of desired employee behaviors and outcomes increases. Ellis et al. (2001) propose this higher service complexity will make the satisfaction mirror weaker because of the number of outcomes the customer and the service organization expects from the service employee. Second, results from several

studies indicate that satisfied employees are more likely to engage in behaviors that assist customers (Locke and Latham, 1990; Weatherly and Tansik, 1993) and Schneider, White and Paul (1998) found that job satisfaction is a primary reason that employees deliver quality service. Good customer service often comes down to managing those people who provide the service and have direct interactions with the customers. Our results show that job satisfaction of service employees can be high and not necessarily result in relevant customer-oriented service behavior. An example of such behavior can be found in high job satisfaction, derived from having interesting discussions (about work-related issues) with colleagues, which lead to customers complaining because frontline employees ignore them at the reception desk because employees are more busy with each other than with the waiting customer. This idea can be recognized in the extension of the job demands-control model to the job demands-control-support model (Dollard et al., 2000). The job demands-control-support model adds support of the supervisor and colleagues as an important source of positive outcomes as job satisfaction, physical and mental health. The service profit chain (Heskett et al., 1994) suggest job satisfaction may be only predictive for job related constructs as employee commitment, employee loyalty... Therefore, further research is necessary to test the effect of constructs as employee commitment and employee loyalty in the relation between job satisfaction and customer satisfaction. Third, the relationship between job satisfaction and customer satisfaction can also be mediated by perceptions of service quality of employees and customers or the perceived service value as antecedents of customer satisfaction (Cronin, Brady, and Hult, 2000).

Our results suggest that *satisfied customers have a positive influence on service employees*. The specific environment of a health care organization can strengthen this link. Customer satisfaction in health care is not unrelated to the health outcome of the patient and we suppose that most health care employees have chosen for their health care job because of the charitable characteristics; they want to see their patients as healthy as possible or at least satisfied with the care they receive.

Given the negative impact of job satisfaction on customer satisfaction, we have studied the employee-related antecedents of job satisfaction and other

antecedents of customer satisfaction in order to find empirical evidence for the possible reasons for this negative effect.

Employee-related antecedents of job satisfaction

The heretofore untested simultaneous influence of *quantitative and qualitative job stressors and empowerment on job satisfaction* and customer satisfaction is partially supported by our results and build on the extant literature. Psychological job demands significantly affect job satisfaction, while physical demands have no significant influence on job satisfaction. The former is in line with prior empirical research testing the influence of the job demands-control model on the job satisfaction outcome (e.g. de Jonge et al., 1999). The latter is in line with Pelfrene, Vlerick, Kittel, Mak, Kornitzer and De Backer (2002), who did found physical job demands are less important than psychological demands as predictor of psychological well being. Service employees seem to place greater importance on the psychological job demands for job satisfaction than they do on the qualitative job stressors. Although Pelfrene et al. (2001) found that empowerment seems to have a larger impact than psychological demands on job satisfaction, we found only an indirect effect of empowerment on job satisfaction. From a managerial standpoint, this stresses the importance of a reduction in quantitative job stressors as a strategic objective to enhance job satisfaction.

Self-efficacy appears to have a prominent effect on job satisfaction. Our results indicate that the degree of empowerment and role ambiguity influenced job satisfaction through feelings of competence. Although this finding is not new, it underscores the importance of the self-efficacy construct for satisfaction of customer-contact employees (Jex and Gudanowski, 1992; Hartline & Ferrell, 1996). Our finding that role ambiguity decreases self-efficacy was not hypothesized in the hypothesized model. However, the final model indicates that the difficulties of service employees have to fulfil multiple roles caused by role ambiguity may decrease employees' feelings of competence.

Employee-related antecedents of customer satisfaction

Our results provide evidence that *quantitative and qualitative job stressors and empowerment influence customer satisfaction* in a direct and indirect way. The qualitative job stressors role conflict and role ambiguity have a direct negative impact on customer satisfaction. In addition to the direct effects, we argue for consideration of the indirect effects that quantitative psychological job demands have on customer satisfaction.

Our results strengthen the importance of empowerment for customer satisfaction. Empowerment has a direct impact on customer satisfaction and indirect on customer satisfaction through customer orientation. Bowen and Lawler (1992) point out several advantages that empowerment brings to service firms (Hartline et al., 2000). Among these advantages are faster response to customer needs and problems, more satisfied employees, enthusiastic and warm customer interactions, innovative new ideas, and loyal customers. From a managerial standpoint, these results stress the importance of a reduction in qualitative job stressors and an increase of empowerment as a strategic objective to enhance customer satisfaction.

Our results strengthen the argument that service employees improve customer satisfaction by engaging in activities that customize the service encounter. Empowered employees are more likely to exhibit customer-oriented behaviors, because they become more flexible and adaptive in the face of changing customer needs (see Scott and Bruce 1994). Although previous research indicates that customer orientation is a more direct antecedent of customer satisfaction than more traditional measures of the work environment as employee morale, employee satisfaction and loyalty (Schneider et al. 1996), our results suggest the strong negative impact of job satisfaction on customer satisfaction. A possible explanation can be found in parallel with Moshavi and Terborg (2002), who found that even under conditions where human resource practices constrain performance, high performance is not constrained under these conditions when service employees are more satisfied with their jobs. Satisfied employees are often easier to manage than dissatisfied employees (Lau, 2000).

Limitations and future research

No study is devoid of limitations; some methodological remarks need to be made. First of all, a limitation of this study is its field study design. Although the advantage of this design is that we were able to study actual encounters with real customers in the work setting, hence enhancing the generalizability of the study, it did not permit to study one-to-one encounters between customers and employees. Therefore, we aggregated customer data on outpatient clinic level.

Another limitation is that we studied only health care professionals, which has its advantages as well as disadvantages (De Jonge et al., 2001). An advantage of studying health care professionals is that we had low variance in socio-economic status, which precludes confounding effects (Sheffield, Dobbie and Carroll, 1994). The challenge is, however, to obtain enough variance on the variables of interest to allow hypothesis tests. Compared to large multi-occupation studies, we might have some restriction in the range of our variables. But health care professionals as an occupational group have the advantage of providing much natural variance because of different types of health care areas, and because different specialties exist within the same general hospital (Fox, Dwyer, and Ganster, 1993; Ganster and Fusilier, 1989). Nevertheless, generalization of the current results to other occupations needs further empirical examination.

A third limitation is that all outpatient clinics belong to one single university hospital. The advantage is that the general employee-related context is comparable. Disadvantages are the potential threats to external validity from this research strategy. Particularly, one has to be very careful not to generalize from these results. On the other hand, the job environment of the employees in the university hospital represented a range of 'typical' job profiles in health care.

We used self-report measurements of job stressors and empowerment. Future research should combining these self-report measures with more objective measures in order to study if the effect of work conditions can be attributed to objective more demanding work environments or only to service employees' perceptions of these work conditions.

According to Wetzels (1998), there are some intermediate variables between role conflict and role ambiguity and employee performance. Obviously, many other constructs as emotional demands and service climate, which could affect the relation between service employees and customer satisfaction are not incorporated in the model. Although, some authors found significant interactions between job demands and job control (e.g. de Jonge et al., 1999; Dwyer and Ganster, 1991), other authors did not find significant interactions (e.g. Van der Doef and Maes, 1999). Based on the latter, we did not incorporate interaction effects in the tested model. It is impossible in a single model to consider all concepts relevant to the subject. It is hoped that this study will generate to further, more sophisticated testing of the relationships between the variables.

Cross-sectional designs are likely to inflate the observed correlations between predictors and outcomes because of method variance, which is contributed to by response consistency effects. Longitudinal research would give more evidence about the causal relationships between the constructs.

Further research on what is needed to obtain a good working satisfaction mirror.

Conclusion

This study contributes to the literature on how work pressure-customer satisfaction relationships are affected by employee responses as self-efficacy, customer orientation, and job satisfaction. Effective human resource strategies are essential to organizational survival and change, providing important competitive advantages in the global environment (Lau, 2000). According to the internal marketing perspective, if the service organization wants its contact employees to do a great job with its customers, it must be prepared to do a great job with its employees (George, 1990). The internal exchange between contact employees and the organization must be operated effectively and efficiently before the organization can be successful in achieving the goal of external change (Yoon et al., 2001). But we must be aware for the 'human resource trap'. This is the belief that all good and bad things that happen to customers in a service business are caused by human resource

policies, practices and procedures (Lau, 2000; Schneider and Bowen, 1995). Customer satisfaction could benefit from reducing qualitative stressors, enhancing empowerment, and encouraging customer orientation. Job stress can be established as an important determinant of customer satisfaction and organizations may give reducing job stress a higher priority because of the economical importance. Finally, job satisfaction does not automatically lead to customer satisfaction. It is important to acquire further insight into the complex relationship between the two constructs.

A cautious generalization and summary of the results of this study lead to the following recommendations:

- It is important to carefully monitor employee behavior to customer satisfaction. Employee behavior is not only an important indicator of customer satisfaction, but they are also indicators of organizational success and can be early warning signs of problems and potential organizational failure.
- It seems that in health care, there is a high prevalence of high demanding jobs. Special attention should be given to these employees, who have less control over their work environment, because they might deliver a lower service quality in their interaction with the customer.
- The findings suggest that augmenting empowerment should relate positively to employees' job satisfaction and customer satisfaction. As such, the present study provides some evidence in support of the beneficial impact of empowerment – that is providing employees with opportunities to have greater control and involvement in task processes and activities.
- Self-efficacy appears to have a prominent role effect on job satisfaction. The findings suggest that the difficulties of service employees having to fulfill multiple roles caused by role ambiguity may decrease employee's feelings of competence. Therefore, service organizations should try to reduce the role stress of the service employees.

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Chapter 6

The effect of empowerment to customer service evaluations

THE EFFECT OF EMPOWERMENT TO CUSTOMER SERVICE EVALUATIONS

Stefanie De Man¹⁸, Paul Gemmel¹⁹, Peter Vlerick²⁰, Rudi Dierckx²¹

¹⁸ ICM doctoral fellow, Vlerick Leuven Ghent Management School, Belgium

¹⁹ Faculty of Economics and Business Administration, Ghent University and Vlerick Leuven Ghent Management School, Belgium

²⁰ Faculty of Psychology and Educational Sciences, Ghent University, Belgium

²¹ Division of Nuclear Medicine, Ghent University Hospital, Belgium

THE EFFECT OF EMPOWERMENT TO CUSTOMER SERVICE EVALUATIONS.

Abstract

In this paper, we investigate how empowerment is linked to customer service evaluations. In addition to prior research, we take customers' wait satisfaction into account while studying customer service evaluations in terms of service quality perceptions and overall customer satisfaction.

We found that wait satisfaction exerted quite a pervasive effect in the tested model. The results offer evidence for a positive influence of empowerment on wait satisfaction. Our empirical results provide evidence for a direct effect of wait satisfaction on overall customer satisfaction and indirect effects through four of the five Servqual dimensions (tangibles, reliability, assurance and empathy). According to prior service quality research, we found a strong impact of reliability and assurance on overall customer satisfaction but wait satisfaction eliminates the effect of their responsiveness perception on overall customer satisfaction.

Keywords: empowerment, wait satisfaction, service quality, customer satisfaction

THE EFFECT OF EMPOWERMENT TO CUSTOMER SERVICE EVALUATIONS.

Service encounters can be viewed as a sequence of events that unfolds over time (Dubé, Schmitt, and Leclerc, 1991). Dubé-Rioux, Schmitt and Leclerc (1989) divide the service encounter into pre-consumption, core service delivery and post-consumption phase. Pre-consumption incorporates waiting for the core service to be performed (Liljander and Mattson, 2002). Post-consumption evaluations consist of the customers' overall responses to the service encounter and encompass customers' perceptions of service quality and overall customer satisfaction. *Service quality* can be defined as an overall judgement similar to "attitude towards the service" (Parasuraman, Zeithaml, and Berry, 1988) and generally accepted as antecedent of overall customer satisfaction (Zeithaml and Bitner, 2003). Service quality is associated with an attitude representing a long-term, overall evaluation, whereas *overall customer satisfaction* represents a short-term, transaction-specific judgement of the whole service process (Cronin and Taylor, 1994).

Previous literature reveals that pre-consumption affective responses might guide consumers' post-consumption evaluations (Mattila and Wirtz, 2002). The waiting literature has revealed that pre-process waiting generates more intense negative affective responses than in-process waiting (Davis and Maggard, 1990; Dubé-Rioux et al., 1989, Dubé et al., 1991). Maister (1985) argues that waiting experiences in a service organization significantly affect the overall perceptions of the quality of services provided. The extent to which customer satisfaction with pre-process waiting influences consumers' service evaluations is unclear. Studies of customers' reactions to service waits have mainly focused on the strength of dissatisfaction that longer waits cause (Houston, Bettencourt, and Wenger, 1998; Taylor, 1994) and the impact of waiting on customers' service quality perceptions (Taylor, 1995). Pruyn and Smidts' model (1992) suggests that overall customer satisfaction with the service is influenced by satisfaction with the wait. This article addresses the gap in the literature by examining the impact of customers' satisfaction

with all aspects of the pre-process waiting experience, i.e. *wait satisfaction*, on post-consumption service evaluations.

Wait satisfaction is hypothesized to influence overall customer satisfaction in two ways. First, we hypothesize that wait satisfaction would have a direct effect on overall customer satisfaction. In accordance with Pruyn and Smidts' model (1992), we hypothesize that customers, who are satisfied with the wait, should report higher overall customer satisfaction than customers, who were dissatisfied with their waiting experience. Second, we hypothesize that wait satisfaction would have an indirect effect on overall customer satisfaction through perceived service quality of the customer. The most commonly used instrument to measure service quality in services, Servqual, studies service quality in five dimensions: tangibles (physical facilities, equipment and appearance of personnel), reliability (ability to perform the promised service reliably and accurately), responsiveness (willingness to help customers and provide prompt service), assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence), and empathy (caring, individualized attention provided to customers).

Taylor (1995) investigated in an experimental study the effects of different aspects of the waiting experience on service quality perceptions. Objective waiting time, involving either a delay of 10 minutes or no delay at all, did not significantly influence consumers' responses to the Servqual dimensions of empathy and assurance, but did influence the tangibles and reliability dimensions. The more control the service provider was perceived to have over the cause of waiting, the lower the overall and specific evaluation of service dimensions (reliability, responsiveness and assurance). Tangibles, reliability and responsiveness were rated more highly by consumers whose waiting time was filled with activity than by consumers whose waiting time was not filled with activity. How the waiting time was filled—that is, whether the activity related to the service or not—had no impact on the tangibles, reliability and responsiveness dimensions. The highest evaluations were found for tangibles, reliability and responsiveness for waiting consumers who perceived that the service provider had low control over the delay, and whose time was filled with an activity. Since we defined wait satisfaction as satisfaction with all

aspects of the pre-process wait, we expect that positive feelings of wait satisfaction will spill over to better perceptions of tangibles, reliability, responsiveness, assurance and empathy, which will result in higher overall customer satisfaction.

Hypothesis 1: The higher the wait satisfaction, the higher the overall customer satisfaction.

Hypothesis 2-6: The higher the wait satisfaction, the higher the customers' Servqual perception of tangibles, reliability, responsiveness, assurance and empathy.

Hypothesis 7-11: The higher the Servqual perception of tangibles, reliability, responsiveness, assurance, and empathy, the higher the overall customer satisfaction.

Many service scholars stressed the importance of human resource management for customers' service evaluations (e.g. Bateson, 1995; Bowen, Schneider, and Kim, 2000; Heskett, Sasser, and Schlesinger, 1997). When organizations aim at improving their services and satisfying their customers, they must be customer-oriented and research on frontline employee behavior influencing the service interaction with customers is crucial (e.g. Bitner, Booms, and Tetreault, 1990; Bitner, Booms, and Mohr, 1994; Hartline, Maxham, and McKee, 2000; Lau, 2000). In service encounters, employee's feelings about their jobs will spill over to affect how customers feel about the service they get. This is particularly important when employee attitudes are a key part of the service package (Bowen and Lawler, 1992). Overall customer satisfaction with services depends at least on how well service employees perform in their job (e.g. Bateson, 1995; Bowen, et al., 2000; Mattila and Enz, 2002; Hartline and Ferrell, 1996; Kelliher and Perrett, 2001; Kelliher and Riley, 2002; Lau, 2000; Norrmann, 1984). In the present article, we focus on the effect of empowerment of service employees on customer service evaluations.

Empowerment is fundamentally a motivational process of an individual's experience of feeling enabled (Corsun and Enz, 1999) and refers to the degree that employees are allowed to make decisions about how to accomplish job tasks. Empowerment is an integral part of the strategy to improve customer satisfaction by developing procedures to carefully manage output quality. It has been suggested that

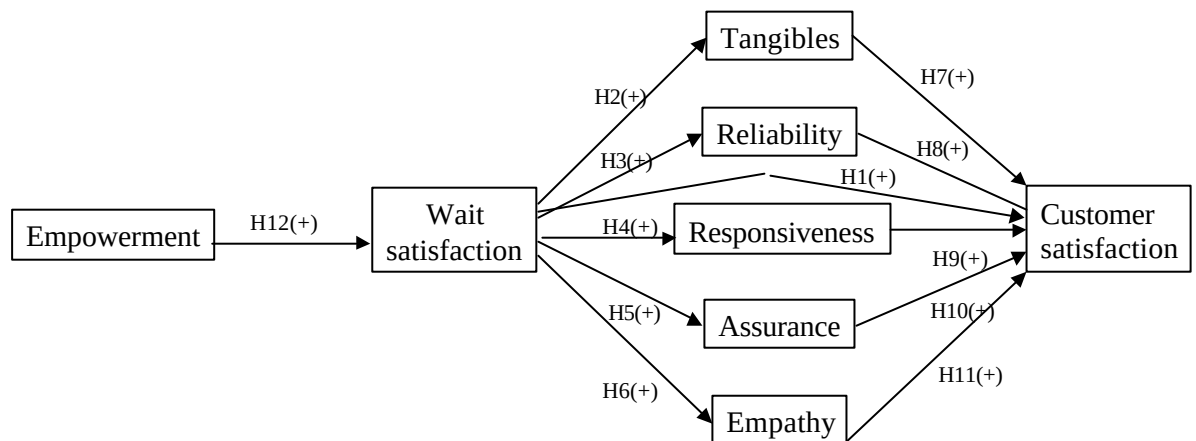
a customer-focused service organization must begin at the top with management support of customer service imperatives and employee relations efforts necessary to be successful in the service industry (Schneider and Bowen, 1995). The service-oriented climate of an organization must be supported by the structure of the organization, which allows employees to act in a more service-oriented way. Employees are not only expected to accept a culture of continuous improvement but to take the responsibility for quality performance as well (Lawler and Mohrman, 1998). This responsibility must be accompanied with enough power to continuously improve: employees must be allowed to make decisions about how to accomplish job tasks. When situations are structured in such a way that employees feel empowered, the organization is likely to benefit both in terms of the attitude of employees and the organization's effectiveness. Previous research indicated the positive impact of an empowered workforce on high quality customer service (Bowen and Lawler, 1992; Bowen and Schneider, 1985; Fulford and Enz, 1995; Sparrowe, 1995) and overall customer satisfaction (Hartline and Ferrell, 1996; Schneider, Brief, and Guzzo, 1996).

Employees want work that allows them to use their knowledge and skills effectively, and to produce something that they can be proud of that has social relevance (Bruce and Blackburn, 1992). In this respect, frontline employees desire tools and authority as a frontline employee to serve the customer (Zeithaml and Bitner, 2003). Control over the service process increases the employee's ability to satisfy the customers' need promptly and flexibly (Bateson, 1995). Frontline employees should have the power or latitude to adapt their behaviors to the demands of each and every service encounter (Chebat and Kolias, 2000). Empowerment as freedom to structure work tasks, prioritization of tasks, and time management all contribute to a more flexible job (Gosnell, 2000) and quicker response to the customer, who is more satisfied with the waiting. Therefore, we propose the following hypothesis:

Hypothesis 12: Employees' empowerment is positively related to customer's wait satisfaction.

The purpose of this study is to investigate the impact of empowerment on customers' evaluations of the service. What differentiates this study from the previous ones is that it incorporates the wait satisfaction of the consumers. The proposed model is shown in Figure 1. Empowerment is modeled as exogenous variable in the model. This is appropriate because the purpose of this study is to model how empowerment influences wait satisfaction, service quality perceptions and overall customer satisfaction.

Figure 1. Conceptual model.



Methodology

Research design

Our empirical study was conducted in 9 outpatient clinics of a university hospital. A package containing the employee questionnaire, a return envelope, and a cover letter was given to the 209 employees (physicians, nurses and administrative personnel) of the 9 outpatient clinics. 116 employees completed the questionnaire (response rate: 55.5%). 28.9 % of the sample was male, mean age was 38.51 (s.d.=10.93). 1239 patients, visiting one of the outpatient clinics within one week chosen at random in October-December 2002, received a patient questionnaire. Data were collected of 592 patients (response rate: 47.8, 34.2% male, mean age 39.67, s.d.= 19.63) concerning wait satisfaction, service quality perceptions and overall customer satisfaction.

This field study does not permit to study one-to-one service encounters between customer and employees, therefore the employee data were aggregated on outpatient clinic level by taking the average of outpatient clinic employees' scores for empowerment. Aggregation of individuals' perceptions of the level of empowerment is appropriate if the grouping makes conceptual sense given the researcher's objective (Schmitt and Allscheid, 1995). Aggregating attitudes within organizational units is based on a belief in the existence of the influence of the unit's management empowerment (Kanter, 1993). The customer data of wait satisfaction, service quality perceptions and overall customer satisfaction were used at individual level.

Measures

To remain consistent with previous research, the measures were selected from previous studies in marketing, management, and psychology. Four self-report scales were used in this study. Coefficient alphas, means and standard deviations can be found in Table 1. All measurement instruments used had an acceptable alpha coefficient (all higher than .70).

Empowerment was measured by the job control scale of de Jonge, van Breukelen, Landeweerd and Nijhuis (1999). The scale includes nine questions about the employee's opportunity or freedom, inherent in the job, to determine a variety of task elements, like the method of working, the pace of work and the work goals. An

example item is: 'My work allows me to make many decisions myself'. A 5 point Likert scale is adopted for this scale. The reliability coefficient of the empowerment scale was .82.

Wait satisfaction was assessed by a single item ('In general, how satisfied are you with the waiting time?'). Drolet and Morisson (2001) argue that single item measures incorporate the necessary information about the construct measured. The customer indicated his satisfaction with the wait using a scale anchored by totally unsatisfied (1) to totally satisfied (7).

Service quality perceptions are measured with the SERVQUAL perception scale of Parasuraman et al. (1988). The reliability coefficients for the five SERVQUAL dimensions are between .71 and .85. A 7 point Likert scale is adopted for the SERVQUAL perception scale.

Overall customer satisfaction was measured by a single item ('In general, how satisfied are you with the outpatient clinic?' as in e.g. Mittal, Ross, and Baldasare, 1998). Overall customer satisfaction scores range from one (totally unsatisfied) to seven (totally satisfied).

Table 1. Scales and dimensions used for the statistical analysis.

Scale/dimension	Number of items	Response Scale	a	Mean	SD	Source
Empowerment	9	1-5	.82	3.90	.24	de Jonge et al., 1999
Wait satisfaction	1	1-7	-	5.13	1.52	'In general, how satisfied are you with the waiting time?'
Tangibles	4	1-7	.82	5.48	1.04	Parasuraman, Zeithaml, Berry, 1988
Reliability	4	1-7	.85	5.94	.86	Parasuraman, Zeithaml, Berry, 1988
Responsiveness	4	1-7	.71	5.22	1.19	Parasuraman, Zeithaml, Berry, 1988
Assurance	4	1-7	.84	5.95	.78	Parasuraman, Zeithaml, Berry, 1988
Empathy	4	1-7	.83	5.65	1.08	Parasuraman, Zeithaml, Berry, 1988
Customer satisfaction	1	1-7	-	6.07	.80	'In general, how satisfied are you with the outpatient clinic?'

Table 2. Significant correlations (at .01 level) among measures of role conflict, role ambiguity, empowerment, wait satisfaction, service quality dimensions and customer satisfaction.

Variable	1	2	3	4	5	6	7	8
1. Empowerment	-	.158*	-.190*	.082	.060	-.032	.039	.050
2. Wait satisfaction		-	.296*	.489*	.292*	.249*	.329*	.393*
3. Tangibles			-	.385*	.078	.340*	.102*	.406*
4. Reliability				-	.445*	.492*	.491*	.632*
5. Responsiveness					-	.209*	.648*	.302*
6. Assurance						-	.313*	.511*
7. Empathy							-	.434*
8. Customer satisfaction								-

* significant at .01 level

Test for common method variance bias

To determine the presence of common method variance bias among the customer's self-report variables, a Harman's (1967) one factor test was performed following the approach outlined by previous researchers (Mattila and Enz, 2002; Podsakoff, Todor, Grover, and Huber, 1984). All customer self-report variables were entered into a principal components factor analysis with varimax analysis. Common method variance is present if a single factor emerges from the factor analysis or one 'general' factor accounts for more than 50% of the covariation in the variables. Our analysis revealed a 5-factor structure with each factor accounting for less than 50% of the covariation. Thus no general factor was apparent. Although this analysis does not completely rule out the possibility of common method bias, it does provide some post hoc statistical support for absence of such bias in the findings presented in the Results section.

Data analysis

To evaluate the effect of empowerment on wait satisfaction, service quality perceptions and overall customer satisfaction, structural equation modeling (SEM) was chosen as an appropriate tool for statistical analysis. This approach allows for a comprehensive test of the model as shown in Figure 1. All computations were performed using LISREL 8.5 (Jöreskog and Sörbom, 2001), with covariances as input and using maximum likelihood estimations. Parametric assumptions were mostly fulfilled.

Because of the large number of items used to operationalize all the variables in our model, simultaneous consideration of all observed variables (i.e. items) would result in unreliable parameter estimates and insufficient power (Bentler and Chou, 1987; de Jonge, Dormann, Janssen, Dollard, Landeweerd, and Nijhuis, 2001; Jaccard and Wan, 1996). In accordance to Hair, Anderson, Tatham and Black. (1998), we used the mean score for each scale as input for model testing. Therefore, each of the components in the model was included in the structural equation analyses as a latent variable. In other words, the covariance structure model was simplified by assuming that the observed and latent variables were identical (each construct had only one

operationalization). As there also was no theoretical reason to assume that these variables should be unrelated to each other, they were allowed to covary in the model. Based on Hoyle and Panter's (1998) recommendations, several criteria were used to evaluate fit of the model. These include fit indices as the Chi-square (χ^2), the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), and the Root Mean Square Error of Approximation (RMSEA). The χ^2 is interpreted as the test of the difference between the hypothesized model and the just-identified version of the model. Low nonsignificant values are desired. However, the χ^2 is very sensitive to sample size, thus, in a model with a relatively large sample size, the null hypothesis is expected to be rejected almost all of the time. The GFI indicates the proportion of the observed covariances explained by the model-implied covariances and is analogous to R^2 . The RMSEA is the standardized summary of the average covariance residuals and is thus a measure of the lack of fit between the data and the model. Low values (between 0 and .08) indicate a good fitting model.

Results

Prior to the LISREL analyses, Pearson correlations (see Table 2) and variance inflation factors (VIF's) were computed to test for multicollinearity between the constructs in the tested model. The significant correlations between the variables ranged from .102 to .648. The highest VIF is 1.724 for responsiveness, which let us conclude that the effect of multicollinearity is negligible, since Hair et al. (1998) suggest a cutoff value of 10.00 as an acceptable VIF.

We accomplished hypotheses testing by examining the completely standardized parameter estimates and their t values. Estimating the hypothesized model produced following statistics: $\chi^2 = 41.62$ ($p = .00$), goodness-of-fit index (GFI) = .98, adjusted goodness-of-fit index (AGFI) = .89, comparative fit index (CFI) = .97, parsimony normed index (PNFI) = .21, and root mean square error of approximation (RMSEA) = .10. The structural parameter estimates from the hypothesized model are reported in Table 3. One-tailed tests of significance were used to determine the significance of each path coefficient.

Table 3. Structural parameter estimates: path coefficients of model (n=534)

Path	Model			
	Hypothesis	Coefficient	t-value	Hypothesis testing
Empowerment -> wait satisfaction	H12 (+)	.16	3.71	Failed to reject
Wait satisfaction -> customer satisfaction	H1 (+)	.16	4.65	Failed to reject
Wait satisfaction -> tangibles	H2 (+)	.34	8.19	Failed to reject
Wait satisfaction -> reliability	H3 (+)	.44	13.55	Failed to reject
Wait satisfaction -> responsiveness	H4 (+)	.33	6.83	Failed to reject
Wait satisfaction -> assurance	H5 (+)	.22	6.79	Failed to reject
Wait satisfaction -> empathy	H6 (+)	.36	7.77	Failed to reject
Tangibles -> customer satisfaction	H7 (+)	.15	4.65	Failed to reject
Reliability -> customer satisfaction	H8 (+)	.39	8.49	Failed to reject
Responsiveness -> customer satisfaction	H9 (+)	-.06	-1.92	Rejected
Assurance -> customer satisfaction	H10 (+)	.35	7.94	Failed to reject
Empathy -> customer satisfaction	H11 (+)	.15	4.45	Failed to reject

Our results indicate that empowerment affects wait satisfaction (in support of H12, standardized path coefficient = .16, t value = 3.71). As hypothesized, wait satisfaction had both a direct and indirect effect on overall customer satisfaction. First, higher levels of wait satisfaction were associated with increased overall customer satisfaction (H1 supported, standardized path coefficient = .16, t value = 4.65). Second, wait satisfaction also influenced overall customer satisfaction through tangibles (H2 and H7 supported, standardized path coefficients = .34 and .15, t values = 8.19 and 4.65), reliability (H3 and H8 supported, standardized path coefficients = .44 and .39, t values = 13.55 and 8.49), assurance (H5 and H10 supported, standardized path coefficients = .22 and .35, t values = 6.79 and 7.94) and empathy (H6 and H11 supported, standardized path coefficients = .36 and .15, t values = 4.64 and 7.77). The indirect path from wait satisfaction through service quality dimensions tangibles, reliability, assurance and empathy to overall customer satisfaction suggests that the relationship between wait satisfaction and overall customer satisfaction is mediated by the way in which customers perceive the service quality. Wait satisfaction has a positive impact on responsiveness (H4 supported, standardized path coefficient = .33, t -value = 6.83), but responsiveness does not have a significant impact on overall customer satisfaction (H9 rejected, standardized path coefficient = -.06, t -value = -1.92) in the tested model.

Discussion

The contribution of the current study is to consider wait satisfaction as mediator in the relationship between empowerment and customer evaluations of the service quality and overall customer satisfaction in a framework that facilitates understanding and extend previous findings in this area. Although the waiting literature reveals the importance of the waiting experience for overall customer satisfaction, no prior research considered employee empowerment as antecedent of wait satisfaction. Good customer service often comes down to managing those people who provide the service and have direct interactions with the customers.

The finding that *empowerment* positively impacts wait satisfaction is consistent with current thinking on quality customer service and has practical

implications for organizations. Our results show the strong direct impact of empowerment on wait satisfaction, which suggests that empowered service employees give prompt response to customers' needs, resulting in higher customer satisfaction. The more *empowered* employees are, the more satisfied are their customers with the wait. Kanter's (1993) theory states that people react rationally to the situations in which they find themselves. When employees feel they have sufficient control about their job to serve customers, they are more likely to use this control in order to satisfy customers if the service organization has a service-oriented climate. Bowen and Lawler (1992) point out several advantages that empowerment brings to service firms. Among these advantages are faster response to customer needs and problems, more satisfied employees, enthusiastic and warm customer interactions, innovative new ideas, and loyal customers. Empowered employees are more likely to exhibit customer-oriented behaviors, because they become more flexible and adaptive in the face of changing customer needs (Scott and Bruce 1994). These findings highlight the practical importance of creating environments that provide access to structures that empower employees to accomplish their work.

An examination of the relationships between wait satisfaction and post-consumption evaluations of service quality and overall customer satisfaction provides insight into customer dynamics by which the model operates. Wait satisfaction has a direct and indirect effect on overall customer satisfaction. The strongest relationships are found between wait satisfaction and *reliability* and reliability and overall customer satisfaction. When customers are satisfied with their wait, they perceive personnel's ability to perform the promised service dependably and accurately. The importance of the company delivering on its promises – promises about delivery, service provision, problem resolution, and pricing – for customer satisfaction is supported in previous research, which considered reliability as the most important service quality dimension. Customers want to do business with companies that keep their promises. In health care, this is extremely important, because the wait period is one of the most objective things they can evaluate, promises about the service wait period are therefore very important in health care.

The fact that *assurance* plays a intermediary role in the relationship between wait and overall customer satisfaction, suggests that when customers are satisfied with their wait, they perceive employee's knowledge and courtesy and their ability to inspire trust and confidence higher, which results in a higher overall customer satisfaction. Assurance is the dimension to be particularly important for services that the customer perceives as involving high risk and/or about which they feel uncertain about their ability to evaluate outcomes- in this case medical services (Zeithaml and Bitner, 2003).

When a customer has to wait, it seems logically that his feeling of *empathy* of the service employee diminishes. Empathy is the individualized attention the employees provide their customers. The essence of empathy is conveying, through personalized or customized service, that customers are unique and special (Zeithaml and Bitner, 2003). Customers want to feel understood by and important for firms that provide service for them. The uniqueness of the customer can be reflected in the first contact with the organization by letting customers have a nice waiting experience.

Tangibles are defined as the appearance of physical facilities, equipment, personnel, and communication materials. All of these provide physical representations or images of the service that customers, particularly new customers will use to evaluate quality. Our results show a spill-over effect of the satisfaction with the wait to the perception of the tangible aspects of the service environment.

Customers' wait satisfaction eliminates the effect of their *responsiveness* perception on overall customer satisfaction. The responsiveness dimension emphasizes attentiveness and promptness in dealing with customers requests (Zeithaml, Bitner, 2003). The positive effect of wait satisfaction on responsiveness can be explained by the fact that responsiveness is communicated to customers by the length of time they have to wait for service. Responsiveness perceptions diminish when customers wait to get their services (Zeithaml and Bitner, 2003). Customers perceive long waiting times as employee's unwillingness to help customers (quickly) and to provide prompt services. Taking into account the relation between wait satisfaction and responsiveness may explain the lack of effect of responsiveness on

overall customer satisfaction, since the tested model includes a direct relation between wait satisfaction and overall customer satisfaction.

Limitations and future research

No study is devoid of limitations; some methodological remarks need to be made. First of all, a limitation of this study is its field study design. Although the advantage of this design is that we were able to study actual encounters with real customers in the work setting, hence enhancing the generalizability of the study, it did not permit to study one-to-one encounters between customer and service employees. Therefore, we used aggregated employee data.

Another limitation is that we studied only one occupation, which has its advantages as well as disadvantages (De Jonge et al., 2001). An advantage of a single-occupation group like health care professionals is that we had virtually no variance in socio-economic status, which precludes confounding effects (Sheffield, Dobbie, and Carroll, 1994). The challenge is, however, to obtain enough variance on the variables of interest to allow hypothesis tests. Compared to large multi-occupation studies, we might have some restriction in the range of scores for the measured constructs. But health care professionals as an occupational group have the advantage of providing much natural variance because of different types of health care areas, and because different specialties exist within the same general hospital (Fox, Dwyer, and Ganster, 1993; Ganster and Fusilier, 1989). Nevertheless, generalization of the current results to other occupations awaits further empirical examination.

A third limitation is that all outpatient clinics belong to one single university hospital. The advantage is that the general employee-related context is comparable. Disadvantages are the potential threats to external validity from this research strategy. Particularly, one has to be very careful not to generalize from these results. On the other hand, the job environment of the employees in the university hospital represented a range of 'typical' job profiles in health care.

Obviously, many other constructs, which could affect the relation between service employees and post-consumption service evaluations are not incorporated in the model. Mattila and Wirtz (2000) found that affective responses elicited by the

physical pre-process service environment might guide consumers' postpurchase evaluations (Mattila and Wirtz, 2000). This suggests that service quality perceptions of tangibles can influence wait satisfaction. Although we allowed covariation in the tested model, we did not test explicitly for the effect of tangibles or other service quality dimension perceptions on wait satisfaction. Another construct we did not incorporate is customer orientation. We assumed that the degree of that employees are allowed to make decisions about how to accomplish job tasks (empowerment) in favor of customer-oriented behavior. We did not explicitly test if higher customer orientation is achieved by empowerment and leads to a more favorable customer service evaluation.

Cross-sectional designs are likely to inflate the observed correlations between predictors and outcomes because of method variance, which is contributed to by response consistency effects. Longitudinal research would give more evidence about the causal relationships between the constructs.

Conclusion

This study contributes to the literature on how employee empowerment affects wait satisfaction and post-consumption service evaluations. If one summarizes the results discussed so far, the model shows the central position of wait satisfaction in the relation between service employee behavior in terms of empowerment and customers' post-consumption service evaluations in the specific context of outpatient clinics.

A major contribution of the present work can be found in the results that show the strong impact of wait satisfaction on the five Servqual dimensions and overall customer satisfaction. Especially the customer's perception of reliability is an important mediator in the relationship between wait satisfaction and overall customer satisfaction. Our results provide evidence in accordance with previous research that considers reliability as the most important service quality dimension. In many service encounters, customers have to wait due to several reasons. Waiting is in some situations unavoidable, and the waiting literature provides some effective waiting perception management techniques to make a customer satisfied with his wait. Future

research should integrate organizational, marketing and waiting theory to have a better insight in the employee-customer interaction dynamics.

The present study provides some evidence in support of the beneficial impact of empowerment – that is providing employees with opportunities to have greater control and involvement in task processes and activities. Effective human resource strategies are essential to organizational survival and change, providing important competitive advantages in the global environment (Lau, 2000). According to the internal marketing perspective, if the service organization wants its contact employees to do a great job with its customers, it must be prepared to do a great job with its employees (George, 1990). Interactions between contact employees and the organization must be operated effectively and efficiently before the organization can be successful in achieving the goal of external change (Yoon, Beatty, and Suh, 2001). But we must be aware for the ‘human resource trap’. This is the belief that all good and bad things that happen to customers in a service business are caused by human resource policies, practices and procedures (Schneider and Bowen, 1995). Overall customer satisfaction could benefit from creating a more empowered organizational structure. Empowerment can be established as an important determinant of overall customer satisfaction and organizations may empower their employees because of the economical importance.

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Chapter 7

Summary and discussion

SUMMARY AND DISCUSSION

1. Recapitulation

Customer evaluations of the delivered service are influenced by customer-contact service employee behavior and customer waiting experience. In this dissertation, we studied the impact of some aspects of customer-contact service employee behavior (employee-related antecedents) and customer waiting experience on customer service evaluations in terms of wait satisfaction, service quality perceptions and overall customer satisfaction in outpatient clinics.

Customer focused management is nowadays of strategic importance for service organizations in profit and social profit sector (Schneider and Bowen, 1995; Zeithaml and Bitner, 2003). Customer satisfaction with services depends at least on how well service employees perform their job (Norrman, 1984). When organizations aim at improving their services and satisfying their customers, knowledge of factors affecting service employee behavior is crucial (Bitner, Booms, and Tetreault, 1990; Bitner, Booms, Mohr, 1994; Hartline, Maxham, and McKee, 2000; Lau, 2000). Maister (1985) argued that customer waiting experience in a service organization significantly affects customer service evaluations. Empirical research about the extent to which customer satisfaction with pre-process waiting influences customerservice evaluations was needed. In this dissertation, we aimed to (1) provide evidence for the difference between service employees' and customers' service evaluations, (2) extend the limited research on the impact of customers waiting experience on customer service evaluations, (3) better understand the specific influence of employee-related antecedents on overall customer satisfaction and (4) learn more about the interference of wait satisfaction in the relation between service employee behavior and overall customer satisfaction.

The following section discusses the main results of each chapter, theoretical and practical implications and limitations and suggestions for further research.

1.1. Chapter 2: Patients' and personnel's perceptions of service quality and patient satisfaction in nuclear medicine.

Theoretically and empirically previous research stated that there are no differences between service evaluations of customers and employees (Harkey and Vraciu, 1992; Licata, 1995; O'Connor, Tringh, and Shewchuk, 2000; Soteriou and Zenios, 1999). Based on this conclusion, some authors studied the impact of service-employee behavior on customer evaluations by only measuring the perceptions of the service employees (Wetzels, 1998; Marley, Collier and Goldstein, 2004). In contradiction to previous research, we detected significant differences between service quality perceptions and overall customer satisfaction ratings for service employees and customers. Our empirical results (see fig. 1) indicate that service employees perceive all service quality dimensions as less good than do customers, except for the empathy dimension. The first study of this dissertation underlines the importance of the measurement of customer service evaluations directly by customers' perceptions. The use of customer data on service evaluations instead of employee perceptions of customer service evaluations is necessary to test the impact of customer-contact service behavior on customer service evaluations.

Exploratory factor analysis revealed that in nuclear medicine patients perceive service quality in slightly different dimensions than the original service quality dimensions. In addition to the low Cronbach alphas for the service quality dimensions as perceived by the personnel, further research should test the generalizability of these found service quality dimensions in nuclear medicine.

Since reliability seems to be the most important dimension of service quality (Mowen, Licata, and McPhail, 1993; Zeithaml and Bitner, 1993), we could conclude based on our findings that the most important service quality dimension has the greatest effect on overall customer satisfaction. The tangibles-assurance dimension was strongly associated with overall customer satisfaction. This could be attributed to the fact that in health care customers have not the knowledge to effectively evaluate the more (intangible) quality of the diagnostic intervention (Bowers, Swan, and Koehler, 1994). Given the importance of reliability and tangibles-assurance for patient satisfaction, both can be considered as satisfiers for the nuclear medicine

services, while the limited importance of convenience may be attributed to the fact that convenience is more a dissatisfier for nuclear medicine services.

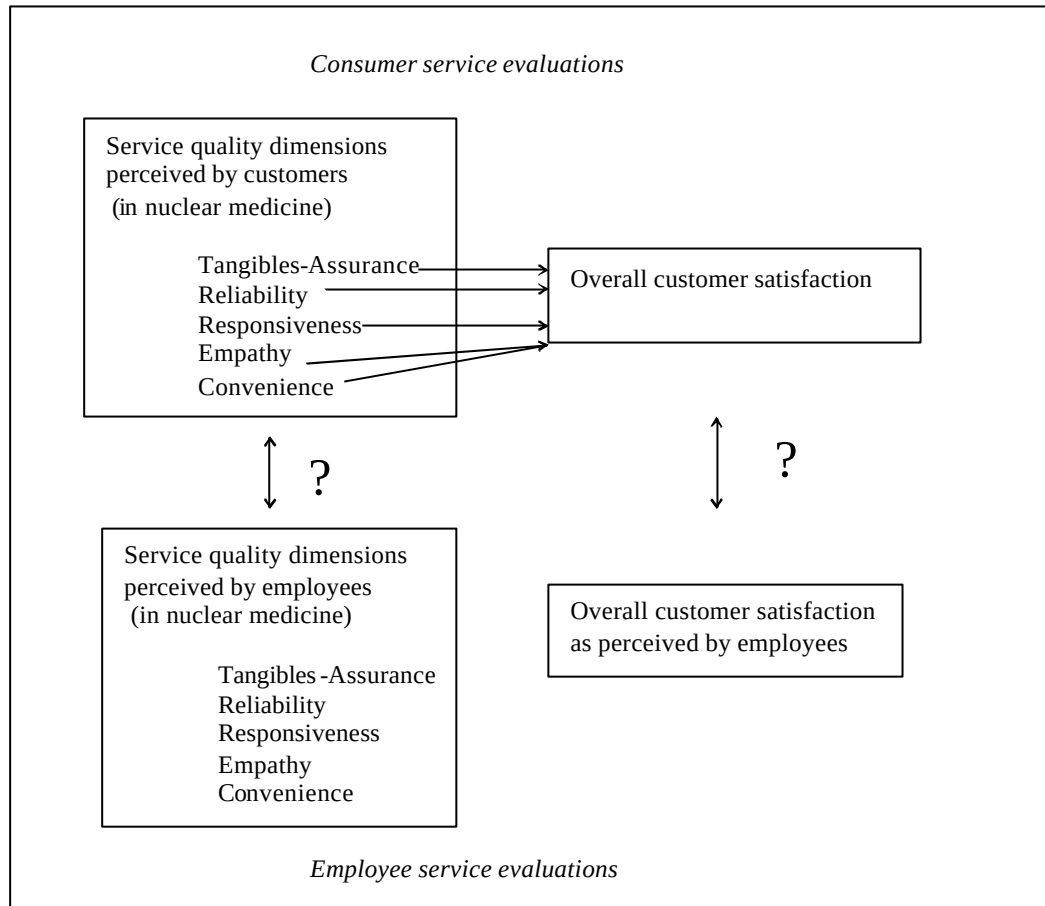


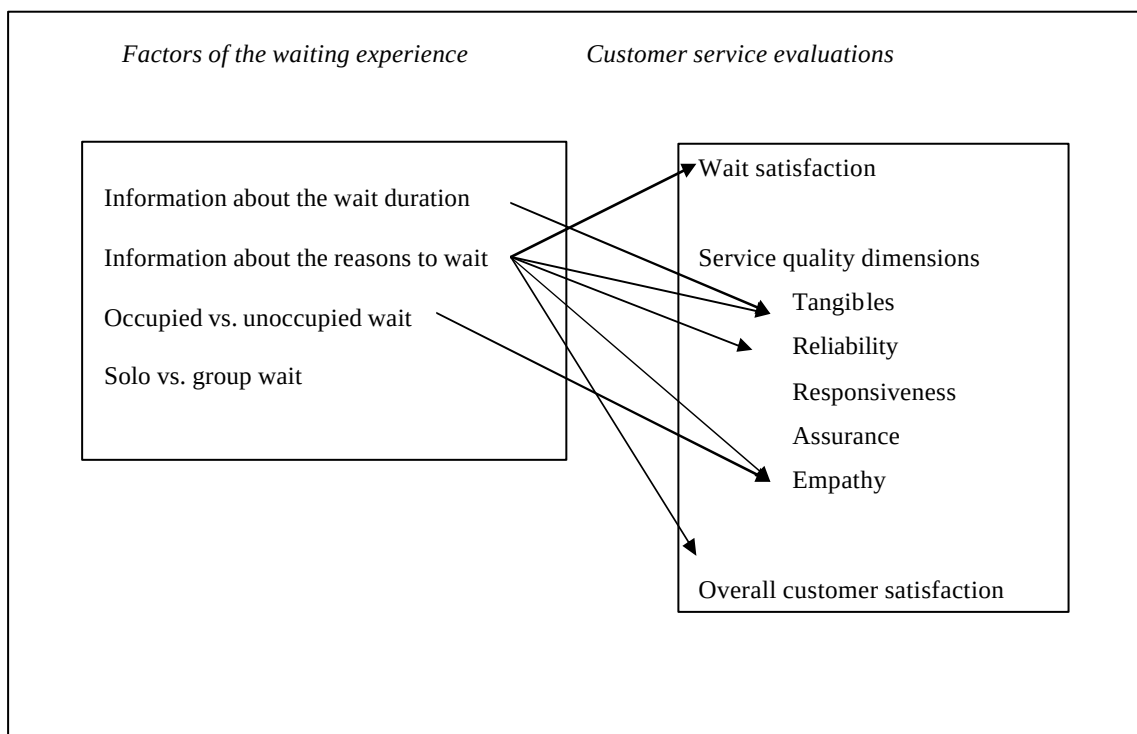
Figure 1. Results of study 1 (*chapter 2*). The arrows represent significant relationships.

1.2. Chapter 3: Waiting for Godot: waiting in nuclear medicine.

In this editorial, we elaborated on waiting problems in outpatient clinics, more specific in nuclear medicine outpatient clinics. The organization's perspective and customer perspective on the impact of waiting times were contrasted. Two approaches to managing waiting times were recognized: the operations management approach and the psychological approach to the waiting experience of the customer.

1.3. Chapter 4: The waiting experience and customer service evaluation in outpatient clinics.

The empirical results of this study highlighted the importance of customer waiting experience for customer service evaluations. We extended previous research on the relation between customer waiting experience and customer service evaluations by investigating the effect of information about the wait duration, information about the reasons to wait, occupied waiting versus unoccupied waiting and solo waiting versus group waiting. Maister (1985) stated theoretically that customers who are informed about the wait duration and the reasons to wait and who are occupied during group waiting have more positive evaluations of the delivered service. No prior study examined how information about the reasons to wait impacts customer service evaluations. The findings showed the influence of factors of the waiting experience on customers' wait satisfaction, service quality perception and overall customer satisfaction (see fig. 2). The studied waiting-related variables had more impact on tangibles and reliability than on other service quality dimensions. Providing information about the reasons for delay had a significant effect on the wait satisfaction, perception of tangibles and reliability and overall customer satisfaction.



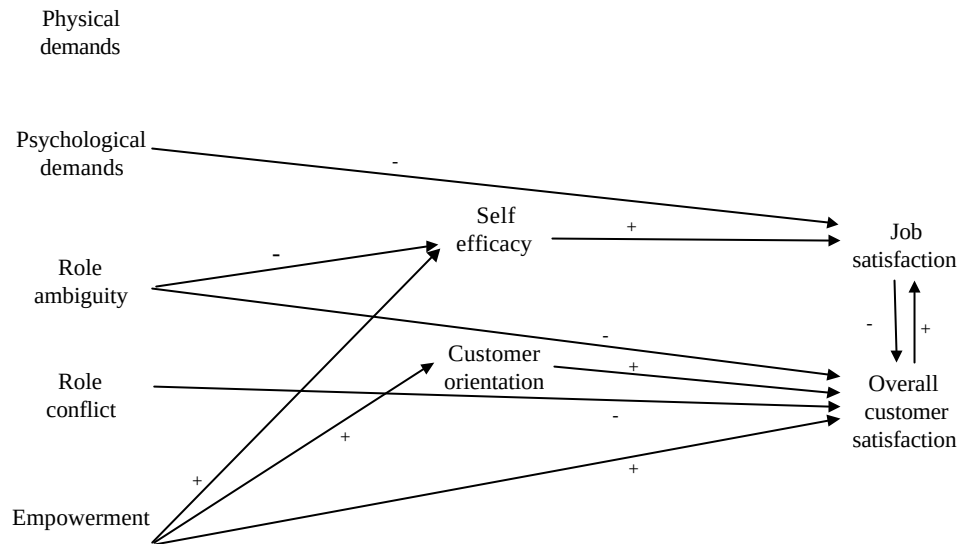
1.4. Chapter 5: Employee-related antecedents of customer satisfaction: how does stress and job satisfaction of service employees influence customer satisfaction?

The results of this chapter let us better understand the influence of several employee-related antecedents on customer service evaluations by investigating the impact of quantitative, qualitative job demands, empowerment, self-efficacy, customer orientation and job satisfaction on overall customer satisfaction. We used the service employee data at individual level and aggregated the customer data on outpatient clinic level. Organizational characteristics and service employee behavior have a clear impact on customer evaluations of the service. The results show a strong negative impact of service employees' job satisfaction on overall customer satisfaction, but we do find a positive impact of overall customer satisfaction on job satisfaction. There was no complete empirical evidence for the 'Satisfaction Mirror' (Heskett, Sasser, and Schlesinger, 1997).

Role ambiguity and empowerment had indirect effects on job satisfaction. By examining the antecedents of overall customer satisfaction, our empirical results showed direct effects of role conflict, role ambiguity, empowerment, and customer orientation but job satisfaction had the strongest direct negative effect on overall customer satisfaction.

As antecedent of job satisfaction, we found that self-efficacy had an important effect as mediator of the negative impact on role ambiguity on job satisfaction. The findings suggested that the higher the psychological demands of the service employee were, the lower the job satisfaction of service employees was.

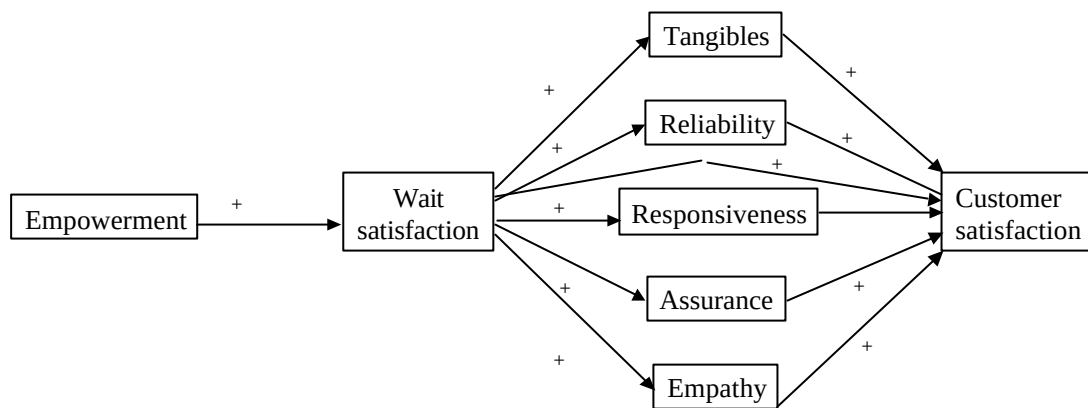
Figure 3. Results of study 3 (*chapter 5*).



1.5. Chapter 6: The effect of empowerment to customer service evaluations

In this study, wait satisfaction played a central role in the relationship between empowerment and post-consumption customer service evaluations. We used the customer data at individual level and the employee data were aggregated on outpatient clinic level. Empowerment had a positive effect on wait satisfaction. Wait satisfaction was associated with high reliability perceptions and overall customer satisfaction. There was a positive impact of wait satisfaction on the other four service quality dimensions (tangibles, responsiveness, assurance and empathy). For each of the service quality dimensions, except responsiveness, the model showed a significant impact on overall customer satisfaction. We learned that customers' reliability perception was the most important connection between wait satisfaction and overall customer satisfaction.

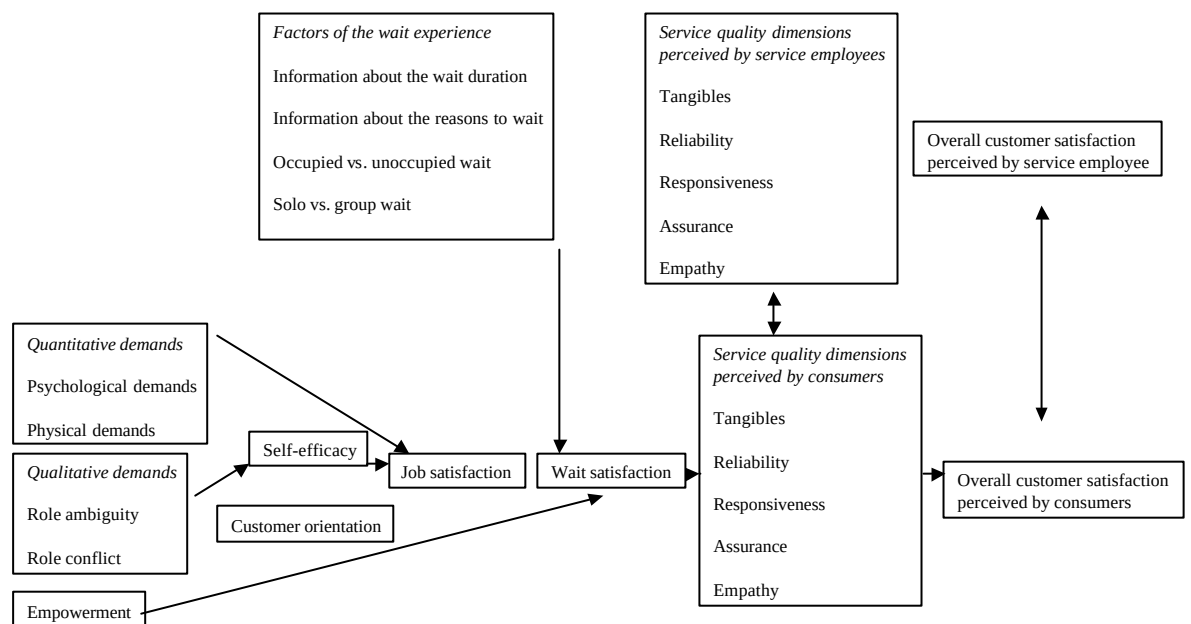
Figure 4. Results of study 4 (*chapter 6*).



1.7. Summary: Link between the research models of the dissertation.

Figure 5 shows the link between the research models of the different chapters of this dissertation.

Figure 5. Overview of the results based on the tested models of the dissertation.



2. Theoretical implications

This studies may provide a fuller theoretical understanding of the influence of customer-contact service employee behavior (employee-related antecedents) and customers' waiting experience on customer service evaluations, in terms of wait satisfaction, perceived service quality and overall customer satisfaction. Several authors (Bitner et al., 1990; Bitner et al., 1994; Hartline et al., 2000; Lau, 2000) stressed the importance of service employee behavior for customer service evaluations. Previous research revealed the influence of the waiting experience on customer service evaluations (e.g. Raminez Valdivia and Crowe, 1997; Taylor, 1994,1995).

In this section, we discuss the theoretical implications of our studies concerning the impact of customer-contact service behavior and customer waiting experience on customer service evaluations.

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2.1. Customer service evaluations

Service quality and satisfaction have been shown not to be the same construct (de Ruyter, Bloemer, and Peeters, 1997). Service quality is associated with an attitude representing a long-term, overall evaluation, whereas satisfaction represents a more short-term, transaction-specific judgment (Cronin and Taylor, 1994). Customers must have experienced a particular service to achieve satisfaction, while perceived service quality is not necessarily the result of any one service encounter (Oliver, 1993; Patterson and Johnson, 1993; Rust and Oliver, 1994; Taylor and Baker, 1994). If service satisfaction and quality are conceptually different constructs, the obvious question to ask is how these constructs are related. There is theoretical and empirical evidence for service quality resulting in satisfaction and not the other way around (Dabholkar, Shepherd, and Thorpe, 2000; Gotlieb, Grewal, and Brown 1994; Oliver, 1997). In chapter 2 and 6, we see that service quality and overall customer satisfaction are positively related but not the same construct. With cross-sectional designs, we were not able to confirm the sequence of service quality and overall customer satisfaction. Future research should be longitudinal to find evidence for the fact that service quality is an antecedent of overall customer satisfaction.

Parasuraman, Zeithaml, and Berry (1988) stated that Servqual as measurement for service quality divided in the five service quality dimensions is sufficiently generic to cover a variety of services in different sectors. The first study (chapter 2) shows that in the specific environment of a nuclear medicine outpatient clinic, service quality can be distinguished in five dimensions, which are comparable but not completely equal to the original service quality dimensions. On the other hand, in chapter 4 and 6, the service quality dimensions of Parasuraman et al. (1988) had all acceptable Cronbach's alpha coefficients.

We learned that service employees underestimate the service quality dimension perceptions and overall customer satisfaction of the customers, except for the empathy dimension. The use of customer data on service evaluations instead of employee perceptions of customer service evaluations is recommended to make conclusions about customer service evaluations.

The reliability dimension is generally considered as the most important service quality dimension. Our results confirm this important role of reliability for overall customer satisfaction in chapter 2 and chapter 6.

In chapter 1, our results show that reliability and tangibles-assurance are the service quality dimensions with the highest positive correlation with patient satisfaction in nuclear medicine. In chapter 6, we see that if we use the original service quality dimensions for nine outpatient clinics that reliability and assurance are the service quality dimensions with the highest positive correlations with patient satisfaction. This suggests that customers seem to find the service employees' ability to perform the service dependable and accurately very important for their overall customer satisfaction. Customers want to do business with service companies that keep their promises. The knowledge and courtesy of employees and their ability to inspire and trust and confidence in customers seems to be also very important in the specific service environment of an outpatient clinic. Given the importance of reliability and assurance for patient satisfaction, both can be considered as satisfiers for patient satisfaction in outpatient clinics.

2.2. The influence of customer waiting experience on customer service evaluations

Maister (1985) stated theoretically that customers who are informed about the wait duration and the reasons to wait and who are occupied during group waiting have more positive evaluations of the delivered service. No prior study examined the influence of information about waiting causes on customer service evaluations. We learned that giving information about the reasons to wait is important to positively influence service evaluations and can be controlled by the service provider.

Reliability deals with the dependability of the service (Parasuraman et al., 1988). If customers do not receive information about the cause of waiting, it is possible that customers evaluate the service as undependable. Taylor (1995) suggested also that delay can also be seen as another sign of undependability. This finding is important, because reliability is generally considered as the most important service quality dimension when evaluating overall customer satisfaction. The limited amount of explanation by the waiting variables studied here on responsiveness can be explained as Taylor (1995) suggested: customers perceive delay as an undependable service that is not related to the employees' willingness to help.

An examination of the relationships between wait satisfaction and post-consumption evaluations of service quality and overall customer satisfaction provides insight into customer dynamics by which the model operates. Wait satisfaction has a direct and indirect effect on overall customer satisfaction. The strongest relationships are found between wait satisfaction and *reliability* and reliability and customer satisfaction. When customers are satisfied with their wait, they perceive personnel's ability to perform the promised service dependably and accurately. The importance of the company delivering on its promises – promises about delivery, service provision, problem resolution, and pricing – for overall customer satisfaction is supported in previous research, which considered reliability as the most important service quality dimension. As mentioned before, customers want to do business with service companies that keep their promises. In health care, this is extremely important, because the wait period is one of the most objective things they can evaluate. Promises about the service wait period are therefore very important in health care.

2.3. The effect of customer-contact service employee behavior and customer waiting experience on customer service evaluations

We discuss the customer-contact service employee behavior (employee-related antecedents) of customer service evaluations by the theories proposed in the introductory chapter 1.

2.3.1. Job demands-control model

The job demands-control model argues that high quantitative demands and low job control leads to lower job satisfaction (Williams, Konrad, Scheckler, Pathman, Linzer, McMurray, Gerrity, and Schwartz, 2001; Dollard, Winefield, Winefield, and de Jonge, 2000; de Jonge, Mulder, and Nijhuis, 1999). This is partially confirmed in chapter 5, where especially psychological job demands had a strong impact on job satisfaction. The direct link between the job demands-control model and overall customer satisfaction was limited to the direct and indirect effect of empowerment on overall customer satisfaction. The positive effect of empowerment on customer orientation had a positive effect on overall customer satisfaction.

Psychological job demands significantly affect job satisfaction, while physical demands have no significant influence on job satisfaction. The former is in line with prior empirical research testing the influence of the job demands-control model on the job satisfaction outcome (e.g. de Jonge et al., 1999). The latter is in line with Pelfrene, Vlerick, Kittel, Mak, Kornitzer, and De Backer (2002), who did find physical job demands are less important than psychological demands as predictor of psychological well being. Service employees seem to place greater importance on the psychological job demands for job satisfaction than they do on the qualitative job stressors.

2.3.2. Role stress

Although many studies find significant impact of role stress on service employee performance (see overview of Nygaard and Dahlstrom, 2002), no prior study examined the impact of role stress on customer service evaluations directly. Our empirical results in study 3 (chapter 5) show that role stress has a negative

significant effect on overall customer satisfaction. Future research is needed to have more information about the relation between role stress and customer service evaluations.

2.3.3. *Empowerment*

Bowen and Lawler (1992) stated that service organizations have rushed to adopt an empowerment approach to service delivery in which employees face customers free of rulebooks encouraged to do whatever is needed to satisfy them. Our results show that empowerment positively impacts wait satisfaction and show a strong indirect impact of empowerment on overall customer satisfaction. This suggests that empowered service employees give prompt response to customers' needs, resulting in higher customer service evaluations. Empowered service employees seem to use their job control to make decisions about the job in favor of the customer. Bruce and Blackburn (1992) attribute this to the fact that service employees want to use their knowledge and skills effectively and want to produce something they can be proud of. In this respect, service employees use empowerment to serve the customer. The more *empowered* employees are, the more satisfied are their customers with the wait and the overall service delivery. It has been suggested that a customer-focused service organization must begin at the top with management support of customer service imperatives and employee relations efforts necessary to be successful in the service industry (Schneider & Bowen, 1995).

2.3.4. *Self-efficacy*

Self-efficacy appears to have a prominent effect on job satisfaction. Our results indicate that the degree of empowerment and role ambiguity influenced job satisfaction through feelings of competence. Although this finding is not new, it underscores the importance of the self-efficacy construct for satisfaction of customer-contact employees (Jex and Gudanowski, 1992; Hartline & Ferrell, 1996). Our finding that role ambiguity decreases self-efficacy was not hypothesized in the hypothesized model of chapter 5. However, the final model of chapter 5 indicates that

the difficulties of service employees having to fulfill multiple roles caused by role ambiguity may decrease employees' feelings of competence.

2.3.5. *Customer orientation*

Customer orientation of service employees influences positively the overall customer satisfaction. Our results strengthen the argument that service employees improve customer satisfaction by engaging in activities that customize the service encounter. Empowered employees are more likely to exhibit customer-oriented behaviors, because they become more flexible and adaptive in the face of changing customer needs (see Scott and Bruce 1994). Although previous research indicates that customer orientation is a more direct antecedent of overall customer satisfaction than more traditional measures of the work environment as employee morale, satisfaction and loyalty (Schneider, Brief, and Guzzo, 1996), our results suggest the strong impact but negative of job satisfaction on overall customer satisfaction.

2.3.6. *Satisfaction mirror.*

In the service profit chain, Heskett, Loveman, Sasser, and Schlesinger (1994) and Heskett et al. (1997) propose that satisfied employees create customer satisfaction because they enjoy the quality of working life provided by the service organization. This is because services are intangible social events where employee attitudes become a prime source of cues available to customers seeking to evaluate a service (Mills, 1986; Schneider and Bowen, 1995; Moshavi and Terborg, 2002). The 'Satisfaction Mirror' (Heskett et al., 1997) states that *job satisfaction* spills over in customer satisfaction. The effects of a positive service encounter are shown in research that has suggested positive relationships between job satisfaction and customer service evaluations (Hallowell, Schlesinger, and Zornitsky, 1996; Heskett et al., 1994, 1997; Moshavi and Terborg, 2002; Rust, Stewart, and Miller, 1996; Schneider, 1980; Schneider and Bowen, 1985; Schneider and Bowen, 1995, Schneider, Brief, and Guzzo, 1996; Silvestro and Cross, 2000; Zeithaml, Berry, and Parasuraman, 1996).

In chapter 5, our results revealed that job satisfaction has a strong negative impact on overall customer satisfaction. There are three plausible reasons for the negative relationship between job satisfaction and overall customer satisfaction. First, the satisfaction mirror, which suggests that happy employees spill over their satisfaction to their customers (Heskett et al., 1997), does not work appropriately in this specific environment of outpatient clinics. Atkins, Marshal, and Javalgi (1996) explained the non-significant but positive link between nurse satisfaction and patient satisfaction as patient satisfaction should be more dependent of the outcome than other aspects of the delivered service, although you can state that patients are not able to evaluate this outcome accurately. Ellis, Gudergan and Johnson (2001) state that if the complexity of the service increases, the number of desired employee behaviors and outcomes increases. Ellis et al. (2001) propose this higher service complexity will make the satisfaction mirror weaker because of the number of outcomes the customer and the service organization desires from the service employee. In health care, several outcomes are desired from the service employee. Second, results from several studies indicate that satisfied employees are more likely to engage in behaviors that assist customers (Locke and Latham, 1990; Weatherly and Tansik, 1993) and Schneider, White, and Paul (1998) found that job satisfaction is a primary reason why employees deliver quality service. Good customer service often comes down to managing those people who provide the service and have direct interactions with the customers. Our results show that job satisfaction of service employees can be high and not necessarily result in relevant customer-oriented service behavior. An example of such behavior can be found in high job satisfaction, derived from having interesting discussions (about work-related issues) with colleagues, which lead to customers complaining because frontline employees ignore them at the reception desk because employees are more busy with each other than with the waiting customer. The service profit chain (Heskett et al., 1994) suggests that job satisfaction may be only predictive for job related constructs as employee commitment, employee loyalty... Therefore, further research is necessary to test the effect of constructs as employee commitment and employee loyalty in the relation between job satisfaction and overall customer satisfaction. Third, the relationship between job satisfaction and overall customer

satisfaction can also be mediated by perceptions of service quality of employees and customers or the perceived value as antecedents of customer satisfaction (Cronin, Brady and Hult, 2000).

3. Practical implications

Understanding the impact of customer-contact service employee behavior (employee-related antecedents) and customer waiting experience on customer service evaluations can help managers of service organizations to develop well-adapted organizational structures and human resource management policies to enhance customer service evaluations.

First of all, the use of service employee data about customer service evaluations does not represent the real service evaluations as perceived by the customers. Since service employees and customers evaluate the delivered service significantly different, management should be aware that investment in those problem areas recognized by service employees will not necessarily result in better service evaluations of customers.

Both customer and service employees recognize the service quality dimension responsiveness as an area to improve in the first study and second study (chapter 2 and chapter 4). This service quality dimension includes theoretically a component addressing waiting time, although our second study confirms that there is no obvious effect of the studied factors of the waiting experience variables on responsiveness. In other words, there seems to be a general problem with responsiveness in all outpatient clinics, and waiting perception techniques (at least, those that we studied in our second study) have no effect on customers' perception of poor responsiveness, but rather on reliability.

If service organizations like to enhance their overall customer satisfaction, they should focus on the reliability perception of the customers. The perception of dependability of the organization and the way it keep its promises can be enhanced by the satisfaction of the pre-process wait. In chapter 3 and 4, we suggested possible approaches to manage the waiting experience. Information about the reasons to wait is a factor that positively influences the perception of reliability and tangibility and overall customer satisfaction. This is an important result for the psychological approach to waiting: information about the reasons to wait can be controlled by the service provider.

To the management of the human resources of a service organization, there must be attention for psychological demands, empowerment and role stress. Psychological demands should be reduced, since they have a negative impact on job satisfaction of the service employee, while empowerment of service employees enhances the employees' job satisfaction and customers' wait satisfaction. Role stress should be avoided to obtain higher employee job satisfaction and overall customer satisfaction. Higher self-efficacy of service employees can be obtained by hiring service employees who are more confident about themselves (self-efficacy is linked with the personality of the service employee) but also by reducing the role ambiguity in the service organization (the findings showed an impact of the service environment on self-efficacy). Concerning their hiring policies, service organizations should hire service employees that are highly customer-oriented because customer orientation has a direct positive effect on overall customer satisfaction.

4. Limitations and future research

In addition to limitations and suggestions for future research described in each chapter, the most important and general ones are considered here.

4.1. Self-assessment reports

A first limitation of this dissertation is that the constructs are measured by *self-assessment reports* of service employees and *perceptions* of customers. It could be argued that employee's and customers' ratings of job demands, empowerment, and service quality on a Likert scale are not necessarily an accurate measure of the 'objective' job demands, empowerment and service quality delivered. For most services, some aspects of service performance can be objectively assessed (e.g. waiting times). Although these attributes can be objectively measured, customers' assessments may not reflect objectively measured performance (Burton, Sheater, and Roberts, 2003). Perceived performance has been strongly established to be positively associated with customer satisfaction (Burton et al., 2003). The data required to obtain objective measures were not available within the organization and had the objective measures been used, it is arguable that the subjective interpretation of job

demands, empowerment, and service quality are a more reliable measure in the relation between service employee behavior and customer evaluations. We found some proof that subjective waiting time is a better covariate in the model than objective waiting time.

4.2. Generalizability of our results

A second limitation is that we studied only health care professionals. Although this restricts variance in socio-economic status (see introduction), the challenge is however to obtain enough variance on the variables of interest to allow hypothesis testing. Compared to large multi-occupational studies, we might have some restriction in the range of our variables. But studying health care professionals has the advantage of providing much natural variance because of different types of health care areas, and because different specialties exist within the same hospital (Fox, Dwyer, and Ganster, 1993; Ganster and Fusilier, 1989). Nevertheless, generalization of the current results to other occupations awaits further examination.

4.3. Methodologies

Each researcher has to use certain methodologies. Each methodology has its weaknesses. The use of questionnaires incorporates some limitations. Although we tested statistically for common method variance bias, this was done after the data-collection. The use of existing although validated measurement scales for the constructs can be considered as another limitation.

Another limitation of this study is its field study design. Although the advantage of this design is that we were able to study actual encounters with real customers in the work setting, hence enhancing the generalizability of the study, it did not permit to study one-to-one encounters between customer and employees. Therefore, we aggregated in study 3 (chapter 5) customer data on outpatient clinic level and in study 4 (chapter 6) service employee data on outpatient clinic level.

Unfortunately, in this study the data made available to the researchers was limited in terms of number of outpatient clinics, precluding the application of multi-

level analysis. With a higher amount of data, multilevel analysis to test the effect of individual and group level influences could be conducted.

Cross-sectional designs are likely to inflate the observed correlations between predictors and outcomes because of method variance, which is contributed to response consistency effects. Longitudinal research would give more evidence about the causal relationships between the constructs.

4.4. More complex integrated models

The complicated interaction between all relevant aspects of customer-contact service employee behavior, customer waiting experience and customer service evaluations can not be empirically tested within one research model. Many other relationships can influence the tested relations. It is impossible in a single dissertation to consider all the concepts relevant to the subject. It is hoped that this dissertation will generate ideas for further, more sophisticated testing of the relationships between the variables, by for example identifying other variables that should be controlled for in future studies.

5. Conclusion

This dissertation shows the importance of customer-contact service employee behavior and customer waiting experience for customer service evaluations.

Our results underline the importance of service-employee behavior for customer evaluations of the delivered service. Our results indicate that service employees and customers have different perceptions of the quality of the delivered service. The reliability of the service has the greatest effect on overall customer satisfaction. Explanation of the reasons why customers have to wait has the strongest impact on the perceptions of reliability of the service, tangible aspects associated with the service and overall customer satisfaction. In contrast with previous research, our results indicate that job satisfaction of service employees has a negative impact on overall customer satisfaction, although overall customer satisfaction positively influences job satisfaction of the service employees. Our empirical results support the importance of the satisfaction with the pre-process waiting experience for customers'

perception of service quality and overall customer satisfaction. More empowered service employees positively influence wait satisfaction and overall customer satisfaction. A high customer perception of the reliability of the delivered service is crucial for positive service evaluations.

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Appendices

APPENDIX A: OVERVIEW OF MEASUREMENT SCALES

Measurement scale	Source	Chapter
Psychological and physical demands	De Jonge et al., 1999	Chapter 5
Role conflict and role ambiguity	Rizzo et al., 1970	Chapter 5
Empowerment	De Jonge et al., 1999	Chapter 5, chapter 6
Self-efficacy	Teeuw, Schwarzer, Jerusalem, 1994	Chapter 5
Customer orientation	Hartline and Ferrell, 1996	Chapter 5
Job satisfaction	How satisfied are you with your job in general?	Chapter 5
Waiting experience	You had something to do during your wait? You knew you had to wait? You knew why you had to wait? You waited alone?	Chapter 4
Subjective waiting time	How long did you wait before the consultation?	Chapter 4
Wait satisfaction	In general, how satisfied are you with the waiting time?	Chapter 4, chapter 6
Service quality	Parasuraman, et al., 1988	Chapter 2, chapter 4, chapter 6
Overall customer satisfaction	In general, how satisfied are you with the outpatient clinic?	Chapter 2, chapter 4, chapter 5, chapter 6

APPENDIX B: EMPLOYEE QUESTIONNAIRE

Persoonlijke gegevens

In dit deel bevragen we een aantal gegevens die betrekking hebben op U en Uw werksituatie. Kruis bij elke vraag het juiste antwoord aan.

1. Geslacht:
 - ☐ Mannelijk
 - ☐ Vrouwelijk
2. Leeftijd: Jaar (*vul in*)
3. U bent
 - ☐ Arts:
 - ☐ Staf
 - ☐ GSO
 - ☐ Dr. Stagair
 - ☐ Labo
 - ☐ Verpleegkundige
 - ☐ Adminisratief medewerk(st)er
 - ☐ Stagair/jobstudent
4. Specialisatie
 - ☐ Algemene poli
 - ☐ Reuma
 - ☐ Nefro
 - ☐ Endo
 - ☐ Onco
 - ☐ Pneumo
 - ☐ Neuro
 - ☐ Gastro
 - ☐ Cardio
5. U badget
 - ☐ Ja, verplicht
 - ☐ Ja, niet verplicht
 - ☐ Nee
6. Officieel aantal werkuren per week (zoals bepaald in het arbeidscontract):
..... Uren
(*vul in*)
7. Totaal aantal werkuren in de voorbije week (van maandag 1 juli 2002 tot en met zondag 7 juli 2002) die ten goede komen aan Uw huidig werk en die U presteerde buiten de gebouwen van het UZ (totaal aantal officiële werkuren niet inbegrepen):
..... Uren (*vul in*)

Werkbeleving

Hieronder vindt U enkele uitspraken die betrekking hebben op hoe U tegen het werken op Uw afdeling aankijkt. Kruis per uitspraak aan wat voor U van toepassing is. Er zijn geen goede of slechte antwoorden. Lees de uitspraken aandachtig en sla geen uitspraken over.

	Nooit	Zelden	Soms	Vaak	Altijd
8. Binnen de afdeling waarin ik werk, wordt onder tijdsdruk gewerkt.	☐	☐	☐	☐	☐
9. Binnen de afdeling waarin ik werk, wordt met pieken gewerkt.	☐	☐	☐	☐	☐
10. Binnen de afdeling waarin ik werk, moet te hard gewerkt worden.	☐	☐	☐	☐	☐
11. Binnen de afdeling waarin ik werk, moet te veel werk verricht worden.	☐	☐	☐	☐	☐
12. Binnen de afdeling waarin ik werk, is te weinig tijd om het werk af te krijgen.	☐	☐	☐	☐	☐
13. Binnen de afdeling waarin ik werk, is het werktempo te hoog.	☐	☐	☐	☐	☐
14. Binnen de afdeling waarin ik werk, is het werk geestelijk inspannend.	☐	☐	☐	☐	☐
15. Binnen de afdeling waarin ik werk, is het werk te complex.	☐	☐	☐	☐	☐
16. In mijn werk moet ik langdurig in voorovergebogen houding werken.	☐	☐	☐	☐	☐
17. In mijn werk moet ik lang achtereen staan.	☐	☐	☐	☐	☐
18. In mijn werk moet ik met gedraaid bovenlichaam werken.	☐	☐	☐	☐	☐
19. In mijn werk moet ik diep voorover buigen met het bovenlichaam.	☐	☐	☐	☐	☐
20. In mijn werk moet ik zeer zware lasten (meer dan 20 kg) tillen of verplaatsen.	☐	☐	☐	☐	☐
21. In mijn werk moet ik ver reiken met de handen of armen.	☐	☐	☐	☐	☐
22. In mijn werk moet ik lang achtereen lopen.	☐	☐	☐	☐	☐

	Nooit	Zelden	Soms	Vaak	Altijd
23. Wordt U in Uw werk geconfronteerd met dood?	☐	☐	☐	☐	☐
24. Wordt U in Uw werk geconfronteerd met ziekte of ander menselijk lijden?	☐	☐	☐	☐	☐
25. Wordt U in Uw werk geconfronteerd met agressieve patiënten?	☐	☐	☐	☐	☐
26. Wordt U in Uw werk geconfronteerd met onvriendelijke patiënten?	☐	☐	☐	☐	☐
27. Wordt U in Uw werk geconfronteerd met patiënten met onrealistische verwachtingen?	☐	☐	☐	☐	☐
28. Wordt U in Uw werk geconfronteerd met meelijwekkende (of zielige) patiënten?	☐	☐	☐	☐	☐
29. Is Uw werk emotioneel zwaar?	☐	☐	☐	☐	☐
30. Wordt U in Uw werk met situaties geconfronteerd die U persoonlijk raken?	☐	☐	☐	☐	☐
31. Wordt er door anderen een beroep op U als persoon gedaan in Uw werk?	☐	☐	☐	☐	☐
32. Wordt U persoonlijk aangevallen of bedreigd in Uw werk (fysiek, psychisch, pesten)?	☐	☐	☐	☐	☐
33. Heeft U in Uw werk contacten met lastige patiënten?	☐	☐	☐	☐	☐
34. Komt U door Uw werk in (emotioneel) aangrijpende situaties terecht?	☐	☐	☐	☐	☐

Hier volgen nog enkele uitspraken over het werk op Uw afdeling. Duid aan in hoeverre U het eens bent met deze uitspraken.

	Geheel mee oneens	Mee oneens	Neutraal	Mee eens	Geheel mee eens
35. Mijn werk vereist dat ik nieuwe dingen leer.	☐	☐	☐	☐	☐
36. Mijn werk brengt steeds weer dezelfde taken met zich mee.	☐	☐	☐	☐	☐
37. Mijn werk vereist creativiteit.	☐	☐	☐	☐	☐
38. Mijn werk vereist een grote mate van vakbekwaamheid.	☐	☐	☐	☐	☐
39. In mijn werk moet ik veel verschillende dingen doen.	☐	☐	☐	☐	☐
40. Ik heb de mogelijkheid mijn eigen bekwaamheden te ontwikkelen.	☐	☐	☐	☐	☐
41. Mijn werk staat me toe zelf veel beslissingen te nemen.	☐	☐	☐	☐	☐
42. In mijn werk heb ik erg weinig vrijheid om te beslissen hoe ik mijn werk doe.	☐	☐	☐	☐	☐
43. Ik heb veel te zeggen over wat er in mijn werk gebeurt.	☐	☐	☐	☐	☐
44. Als een geschreven regel niet volstaat in sommige situaties maken we informele regels om de dingen te doen naarmate we vorderen.	☐	☐	☐	☐	☐
45. Er zijn vele zaken in mijn job die niet ondersteund worden door bepaalde formele procedures .	☐	☐	☐	☐	☐
46. Gewoonlijk verloopt het contact met mijn bedrijf en mijn collega's volgens strikte regels.	☐	☐	☐	☐	☐
47. Contact met mijn bedrijf en mijn collega's gebeurt op een formele, voorafgeplande basis.	☐	☐	☐	☐	☐
48. Ik negeer de regels en maak informele afspraken om sommige situaties aan te pakken.	☐	☐	☐	☐	☐
49. Wanneer regels en procedures bestaan in mijn bedrijf zijn het meestal geschreven afspraken.	☐	☐	☐	☐	☐

Duid aan in welke mate U akkoord gaat met de volgende uitspraken in verband met Uw werk. Let op, deze keer hebt U 7 antwoordmogelijkheden. Er zijn opnieuw geen goede of slechte antwoorden.

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Tussenin	Eerder akkoord	Akkoord	Helemaal akkoord
50. De dingen die ik moet doen zouden beter op een andere manier gedaan worden.	☐	☐	☐	☐	☐	☐	☐
51. Ik krijg een opdracht terwijl ik geen tijd of middelen krijg om ze te voltooien.	☐	☐	☐	☐	☐	☐	☐
52. Ik moet regels aanpassen om een opdracht uit te voeren.	☐	☐	☐	☐	☐	☐	☐
53. Ik werk met twee of meerdere groepen die verschillend tewerk gaan.	☐	☐	☐	☐	☐	☐	☐
54. Ik krijg van twee of meerdere personen verzoeken die onverenigbaar zijn met elkaar.	☐	☐	☐	☐	☐	☐	☐
55. Ik doe dingen die door één persoon (of meerdere personen) geapprecieerd worden en niet door de anderen.	☐	☐	☐	☐	☐	☐	☐
56. Ik krijg een opdracht zonder de nodige middelen om deze uit te voeren.	☐	☐	☐	☐	☐	☐	☐
57. Ik doe dingen die niet nodig zijn.	☐	☐	☐	☐	☐	☐	☐
58. Ik voel me zeker over de mate van bevoegdheid die ik heb.	☐	☐	☐	☐	☐	☐	☐
59. Voor mijn job bestaan er duidelijk geplande doelstellingen en objectieven.	☐	☐	☐	☐	☐	☐	☐
60. Ik weet dat ik mijn tijd juist ingedeeld heb.	☐	☐	☐	☐	☐	☐	☐
61. Ik weet wat mijn verantwoordelijkheden zijn.	☐	☐	☐	☐	☐	☐	☐
62. Ik weet precies wat er van mij verwacht wordt.	☐	☐	☐	☐	☐	☐	☐
63. De uitleg van wat er moet gebeuren is duidelijk.	☐	☐	☐	☐	☐	☐	☐

Persoonlijkheid

Hieronder volgen een aantal woorden of kenmerken die mensen kunnen gebruiken om zichzelf te beschrijven. Omcirkel voor ieder kenmerk het cijfer dat het meest bij U past. Gelieve telkens slechts één cijfer te omcirkelen.

Een voorbeeld ter verduidelijking:

Vb. Bedeesd 1 2 3 4 5 6 7 zelfzeker
Bent U extreem of overduidelijk bedeesd, dan omcirkelt U 1. Denkt U meer dan gemiddeld bedeesd te zijn, kies dan 2 of 3. Score 4 staat halfweg tussen bedeesd en zelfzeker en verwijst dus naar de middelmaat. Scores 5 en 6 geven meer dan gemiddelde zelfzekerheid aan, terwijl 7 op overduidelijke of extreme mate van zelfzekerheid terugslaat.

64. Bedeesd	1	2	3	4	5	6	7	zelfzeker
65. Stil	1	2	3	4	5	6	7	spraakzaam
66. Onderdanig	1	2	3	4	5	6	7	assertief
67. Geremd	1	2	3	4	5	6	7	spontaan
68. Introvert	1	2	3	4	5	6	7	extravert
69. Koel	1	2	3	4	5	6	7	hartelijk
70. Onvriendelijk	1	2	3	4	5	6	7	vriendelijk
71. Zelfzuchtig	1	2	3	4	5	6	7	onzelfzuchtig
72. Tegenwerkend	1	2	3	4	5	6	7	meewerkend
73. Strak	1	2	3	4	5	6	7	soepel
74. Onnauwkeurig	1	2	3	4	5	6	7	nauwkeurig
75. Achteloos	1	2	3	4	5	6	7	nauwgezet
76. Nalatig	1	2	3	4	5	6	7	grondig
77. Onzorgvuldig	1	2	3	4	5	6	7	zorgvuldig
78. Lui	1	2	3	4	5	6	7	ijverig
79. Zenuwachtig	1	2	3	4	5	6	7	rustig
80. Nerveus	1	2	3	4	5	6	7	op zijn gemak
81. Gespannen	1	2	3	4	5	6	7	ontspannen
82. Onstandvastig	1	2	3	4	5	6	7	standvastig
83. Opvliegend	1	2	3	4	5	6	7	kalm
84. Onintelligent	1	2	3	4	5	6	7	intelligent
85. Onverstandig	1	2	3	4	5	6	7	verstandig
86. Fantasieloos	1	2	3	4	5	6	7	fantasierijk
87. Oncreatief	1	2	3	4	5	6	7	creatief
88. Ongeïnteresseerd	1	2	3	4	5	6	7	leergierig

Hieronder volgen enkele uitspraken over hoe U zich op Uw werk gedraagt. Duid aan in welke mate U akkoord gaat met elke uitspraak.

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Tussenin	Eerder akkoord	Akkoord	Helemaal akkoord
89. Ik kan altijd moeilijke problemen oplossen als ik maar hard genoeg probeer.	☐	☐	☐	☐	☐	☐	☐
90. Als iemand mij hindert, kan ik manieren en wegen vinden om te krijgen wat ik wil.	☐	☐	☐	☐	☐	☐	☐
91. Het is gemakkelijk voor mij te houden aan mijn doelen en om mijn doelstellingen te vervullen.	☐	☐	☐	☐	☐	☐	☐
92. Ik ben er zeker van dat ik efficiënt zou kunnen omgaan met onverwachte gebeurtenissen.	☐	☐	☐	☐	☐	☐	☐
93. Ik weet met onvoorziene situaties om te gaan dankzij mijn vindingrijkheid.	☐	☐	☐	☐	☐	☐	☐
94. Ik kan de meeste problemen oplossen als ik er de nodige inspanning voor doe.	☐	☐	☐	☐	☐	☐	☐
95. Ik blijf kalm wanneer ik moeilijkheden zie, omdat ik denk bekwaam te zijn om er mee om te gaan.	☐	☐	☐	☐	☐	☐	☐
96. Wanneer ik geconfronteerd word met een probleem, vind ik meestal verschillende oplossingen.	☐	☐	☐	☐	☐	☐	☐
97. Wanneer ik moeilijkheden heb, kan ik meestal iets bedenken om er iets aan te doen.	☐	☐	☐	☐	☐	☐	☐
98. Ongeacht wat er gebeurt, ben ik normaal in staat om ermee om te gaan.	☐	☐	☐	☐	☐	☐	☐

Hieronder volgen enkele uitspraken over hoe U omgaat met klanten.

99. *Met welke klantengroep komt U het meest in aanraking? (Gelieve slechts één vakje aan te kruisen.)*

- ☐ *Patiënten*
☐ *Verwijzende artsen*
☐ *Andere (vb. leveranciers,...): (specificeer)*

Duid aan in welke mate U akkoord gaat met elke uitspraak voor de klantengroep die U hierboven aankruiste (patiënten, verwijzende artsen of andere).

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Tussenin	Eerder akkoord	Akkoord	Helemaal akkoord
100. Elke klant eist een unieke benadering.	☐	☐	☐	☐	☐	☐	☐
101. Wanneer ik voel dat mijn benadering niet werkt, kan ik gemakkelijk overschakelen op een andere benadering.	☐	☐	☐	☐	☐	☐	☐
102. Ik hou ervan te experimenteren met verschillende benaderingen.	☐	☐	☐	☐	☐	☐	☐
103. Ik verander mijn benadering niet van klant tot klant.	☐	☐	☐	☐	☐	☐	☐
104. Ik ben zeer gevoelig aan de behoeften van mijn klanten.	☐	☐	☐	☐	☐	☐	☐
105. Ik vind het moeilijk om mijn stijl aan te passen aan sommige klanten.	☐	☐	☐	☐	☐	☐	☐
106. Ik varieer mijn benadering van de ene situatie tot de andere.	☐	☐	☐	☐	☐	☐	☐
107. Ik probeer te begrijpen waarom de ene klant verschilt van de andere.	☐	☐	☐	☐	☐	☐	☐
108. Ik heb vertrouwen dat ik effectief mijn benadering kan veranderen wanneer noodzakelijk.	☐	☐	☐	☐	☐	☐	☐
109. Ik behandel alle klanten bijna gelijk.	☐	☐	☐	☐	☐	☐	☐

Tevredenheid

Hierna volgen enkele uitspraken in verband met Uw tevredenheid met bepaalde aspecten van Uw werk. Duid aan in welke mate U akkoord gaat met volgende uitspraken.

Hoe tevreden bent U met volgende aspecten van Uw werk	Helemaal niet tevreden	Niet tevreden	Eerder niet tevreden	Tussenin	Eerder tevreden	Tevreden	Helemaal tevreden
110. Uw werk in zijn geheel.	☐	☐	☐	☐	☐	☐	☐
111. Uw collega's.	☐	☐	☐	☐	☐	☐	☐
112. Uw leidinggevenden.	☐	☐	☐	☐	☐	☐	☐
113. Het beleid van Uw organisatie.	☐	☐	☐	☐	☐	☐	☐
114. De steun die Uw organisatie biedt.	☐	☐	☐	☐	☐	☐	☐
115. Uw mogelijkheden om vooruit te komen binnen deze organisatie.	☐	☐	☐	☐	☐	☐	☐
116. Uw loon.	☐	☐	☐	☐	☐	☐	☐
117. Uw werkzekerheid.	☐	☐	☐	☐	☐	☐	☐
118. Uw vakantieregeling.	☐	☐	☐	☐	☐	☐	☐
119. De inhoud van Uw job.	☐	☐	☐	☐	☐	☐	☐
120. De fysieke werkomstandigheden.	☐	☐	☐	☐	☐	☐	☐
121. De werkdruk.	☐	☐	☐	☐	☐	☐	☐
122. De uurregeling waarin U werkt (dit zijn de tijdstippen waarop U werkt).	☐	☐	☐	☐	☐	☐	☐
123. De patiënt.	☐	☐	☐	☐	☐	☐	☐
124. Het werk van de artsen.	☐	☐	☐	☐	☐	☐	☐
125. Het werk van de verpleegkundigen.	☐	☐	☐	☐	☐	☐	☐
126. Het werk van de technologen.	☐	☐	☐	☐	☐	☐	☐
127. Het werk van de administratieve medewerkers.	☐	☐	☐	☐	☐	☐	☐

Hoe tevreden bent U met	Helemaal niet tevreden	Niet tevreden	Eerder niet tevreden	Tussenin	Eerder tevreden	Tevreden	Helemaal tevreden
128. Uw huidige job in vergelijking met jobs in andere organisaties.	☐	☐	☐	☐	☐	☐	☐
129. De mate waarin U in Uw huidige positie Uw persoonlijke doelstellingen kunt realiseren.	☐	☐	☐	☐	☐	☐	☐
130. De mogelijkheden die deze job U geeft om te doen waar U het best in bent.	☐	☐	☐	☐	☐	☐	☐
131. De mate waarin U Uw verwachtingen die U had op het moment van Uw aanwerving, hebt kunnen realiseren tot op heden.	☐	☐	☐	☐	☐	☐	☐
132. Uw huidige job in het licht van Uw carrière-verwachtingen.	☐	☐	☐	☐	☐	☐	☐

Zie ook volgende bladzijden

Mening over de afdeling Nucleaire Geneeskunde

De volgende reeks met uitspraken gaat over Uw mening rond de afdeling Nucleaire Geneeskunde in het Universitair Ziekenhuis te Gent. In het volgende gedeelte kunt U aanduiden in welke mate U gelooft dat de afdeling Nucleaire Geneeskunde in het Universitair Ziekenhuis (UZ) te Gent voldoet aan elke beschrijving. Er zijn geen goede of slechte antwoorden- het enige waarin we geïnteresseerd zijn is wat Uw ervaringen zijn met de afdeling Nucleaire geneeskunde in het Universitair Ziekenhuis te Gent. Kruis per uitspraak aan wat voor U van toepassing is.

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Tussenin	Eerder akkoord	Akkoord	Helemaal akkoord
133. De afdeling Nucleaire Geneeskunde in het UZ te Gent heeft een moderne uitrusting (machines,...).	☐	☐	☐	☐	☐	☐	☐
134. De fysische faciliteiten (aantrekkelijkheid, comfort en properheid van de wachtzaal, uitrusting, gebouwen en terreinen,...) van de afdeling Nucleaire Geneeskunde in het UZ te Gent zien er aantrekkelijk uit.	☐	☐	☐	☐	☐	☐	☐
135. Het personeel van de afdeling Nucleaire Geneeskunde in het UZ te Gent is goed gekleed en komt verzorgd over.	☐	☐	☐	☐	☐	☐	☐
136. Het uitzicht van de fysische faciliteiten (aantrekkelijkheid, comfort en properheid van de wachtzaal, uitrusting, gebouwen en terreinen,...) van de afdeling Nucleaire Geneeskunde in het UZ te Gent is in overeenstemming met het soort diensten dat ze aanbieden.	☐	☐	☐	☐	☐	☐	☐
137. Wanneer de afdeling Nucleaire Geneeskunde in het UZ te Gent belooft iets te doen tegen een bepaalde tijd, dan doet ze dat ook.	☐	☐	☐	☐	☐	☐	☐
138. Wanneer patiënten problemen hebben, dan is de afdeling Nucleaire Geneeskunde in het UZ te Gent vriendelijk en geruststellend.	☐	☐	☐	☐	☐	☐	☐
139. U weet wat U hebt aan de afdeling Nucleaire Geneeskunde in het UZ te Gent.	☐	☐	☐	☐	☐	☐	☐

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Tussenin	Eerder akkoord	Akkoord	Helemaal akkoord
140. De afdeling Nucleaire Geneeskunde in het UZ te Gent biedt haar diensten aan op de tijd waarop ze het belooft te doen.	☐	☐	☐	☐	☐	☐	☐
141. De afdeling Nucleaire Geneeskunde in het UZ te Gent houdt haar dossiers volledig en foutloos bij.	☐	☐	☐	☐	☐	☐	☐
142. De afdeling Nucleaire Geneeskunde in het UZ te Gent vertelt zijn patiënten niet altijd exact wanneer bepaalde diensten zullen uitgevoerd worden.	☐	☐	☐	☐	☐	☐	☐
143. Patiënten worden niet altijd onmiddellijk bediend door het personeel van de afdeling Nucleaire Geneeskunde in het UZ te Gent.	☐	☐	☐	☐	☐	☐	☐
144. Het personeel van de afdeling Nucleaire Geneeskunde in het UZ te Gent is niet altijd bereid om patiënten te helpen.	☐	☐	☐	☐	☐	☐	☐
145. Het personeel van de afdeling Nucleaire Geneeskunde in het UZ te Gent is te druk bezig om altijd onmiddellijk aan de verzoeken van de patiënten te voldoen.	☐	☐	☐	☐	☐	☐	☐
146. Patiënten kunnen het personeel van de afdeling Nucleaire Geneeskunde in het UZ te Gent vertrouwen.	☐	☐	☐	☐	☐	☐	☐
147. Patiënten voelen zich veilig in hun omgang met het personeel van de afdeling Nucleaire Geneeskunde in het UZ te Gent.	☐	☐	☐	☐	☐	☐	☐
148. Het personeel van de afdeling Nucleaire Geneeskunde in het UZ te Gent is beleefd.	☐	☐	☐	☐	☐	☐	☐
149. Het personeel van de afdeling Nucleaire Geneeskunde krijgt adequate steun vanuit het UZ te Gent om hun werk goed te doen.	☐	☐	☐	☐	☐	☐	☐
150. De afdeling Nucleaire Geneeskunde in het UZ te Gent geeft patiënten geen individuele aandacht.	☐	☐	☐	☐	☐	☐	☐

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Tussenin	Eerder akkoord	Akkoord	Helemaal akkoord
151. Het personeel van de afdeling Nucleaire Geneeskunde in het UZ te Gent geeft patiënten geen persoonlijke aandacht.	☐	☐	☐	☐	☐	☐	☐
152. Het personeel van de afdeling Nucleaire Geneeskunde in het UZ te Gent weet niet wat de behoeften van hun patiënten zijn.	☐	☐	☐	☐	☐	☐	☐
153. De afdeling Nucleaire Geneeskunde in het UZ te Gent heeft niet het beste voor met zijn patiënten.	☐	☐	☐	☐	☐	☐	☐
154. De afdeling Nucleaire Geneeskunde in het UZ te Gent heeft geen openingsuren die passen voor al hun patiënten.	☐	☐	☐	☐	☐	☐	☐

Zie ook volgend blad

Opmerkingen:

Hierna volgen uitspraken over hoe U denkt over de tevredenheid van de **patiënten**. Duid de mate van tevredenheid aan.

	Helemaal niet tevreden	Niet tevreden	Eerder niet tevreden	Tussenin	Eerder tevreden	Tevreden	Helemaal tevreden
155. In het algemeen, hoe tevreden denkt U dat de patiënten zijn over de afdeling?	☐	☐	☐	☐	☐	☐	☐
156. Hoe tevreden denkt U dat patiënten zijn met de communicatie (hoeveelheid informatie die gegeven wordt, begrijpbaarheid van de informatie, informatiedoorstroming,...)?	☐	☐	☐	☐	☐	☐	☐
157. Hoe tevreden denkt U dat de patiënten zijn met de toegankelijkheid van de afdeling (bezoekuren, bereikbaarheid,...)?	☐	☐	☐	☐	☐	☐	☐
158. Hoe tevreden denkt U dat patiënten zijn met de tastbare aspecten van de afdeling (aantrekkelijkheid, comfort en properheid van wachtzaal, uitrusting, gebouwen en terreinen,...)?	☐	☐	☐	☐	☐	☐	☐
159. Hoe tevreden denkt U dat de patiënten zijn met de veiligheid van de afdeling?	☐	☐	☐	☐	☐	☐	☐
160. Hoe tevreden denkt U dat de patiënten zijn over de deskundigheid van het personeel en de onderlinge samenwerking?	☐	☐	☐	☐	☐	☐	☐
161. Hoe tevreden denkt U dat de patiënten zijn over de manier waarop het personeel met hen omgaat?	☐	☐	☐	☐	☐	☐	☐
162. Hoe tevreden denkt U dat de patiënten zijn over de mate waarin het personeel de behoeften van de patiënt begrijpen?	☐	☐	☐	☐	☐	☐	☐
163. Hoe tevreden denkt U dat de patiënten zijn over de behulpzaamheid van het personeel?	☐	☐	☐	☐	☐	☐	☐
164. Hoe tevreden denkt U dat de patiënten zijn met de zorgverlening?	☐	☐	☐	☐	☐	☐	☐
165. Hoe tevreden denkt U dat patiënten zijn met de betrouwbaarheid van de instelling (bijhouden dossiers en administratie, nakomen afspraken, eerlijkheid,...)?	☐	☐	☐	☐	☐	☐	☐
166. Hoe tevreden denkt U dat de patiënten zijn over de mate waarin de instelling luistert naar en rekening houdt met hun klachten, opmerkingen,...?	☐	☐	☐	☐	☐	☐	☐

APPENDIX C: PATIENT QUESTIONNAIRE

Gelieve na het invullen te controleren of U alle 5 bladzijden hebt ingevuld.

Uw persoonlijke gegevens

1. U bent
 - ☐ Patiënt
 - ☐ Familie van patiënt: vader - moeder - broer - zus - oom/neef - tante/nicht - voogd - andere:(onderstreep of vul in bij andere)
2. Geslacht van de patiënt:
 - ☐ Mannelijk
 - ☐ Vrouwelijk
3. Leeftijd van de patiënt: jaar (vul in)
4. Dit is mijn bezoek aan een afdeling Pediatrie in het algemeen (in het UZ Gent²² en andere ziekenhuizen samen). (vul het aantal in)
5. Dit is mijn bezoek aan de afdeling Pediatrie in het UZ Gent. (vul het aantal in)
6. Is de patiënt momenteel opgenomen in het UZ Gent?
 - ☐ Nee
 - ☐ Ja

Mening over de wachttijden

In dit gedeelte zouden we graag uw mening weten over de wachttijden op de afdeling Pediatrie in het UZ Gent.

7. Hoe lang denkt U gewacht te hebben in de wachtzaal voor de consultatie?
..... uur minuten
8. Heeft U **alleen** gewacht?
 - ☐ Nee, familie – vriend(en) (schrapping wat niet past)
 - ☐ Ja
9. Wat deed U tijdens het wachten?

Niets	Lezen	Babbelen	Studeren	Muziek beluisteren	Spelen	Andere:
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²² UZ Gent staat voor UZ Gent

10. Was er voldoende plaats in de wachtzaal?

- ☐ Ja
☐ Nee

11. Wist U waarom U moest wachten?

- ☐ Ja
☐ Nee

12. Vond U dat de volgorde van consultaties eerlijk verliep?

- ☐ Ja
☐ Nee

13. In het algemeen, hoe tevreden bent U met de wachttijd? (Duid aan met een kruisje)

Helemaal niet tevreden	Niet tevreden	Eerder niet tevreden	Tussenin	Eerder tevreden	Tevreden	Helemaal tevreden
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Mening over de afdeling Pediatrie

De volgende reeks met uitspraken gaat over uw mening rond **de afdeling Pediatrie in het UZ Gent**. In het volgende gedeelte kunt U aanduiden in welke mate U gelooft dat de afdeling Pediatrie in het UZ Gent voldoet aan elke beschrijving. Er zijn geen goede of slechte antwoorden, het enige waarin we geïnteresseerd zijn, is wat uw ervaringen zijn met de afdeling Pediatrie in het UZ Gent. Kruis per uitspraak aan wat voor U van toepassing is.

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Tussenin	Eerder akkoord	Akkoord	Helemaal akkoord
14. De afdeling Pediatrie in het UZ Gent heeft een moderne uitrusting (machines,...).	☐	☐	☐	☐	☐	☐	☐
15. De fysische faciliteiten (aantrekkelijkheid, comfort en properheid van de wachtzaal, uitrusting, gebouwen en terreinen) van de Pediatrie in het UZ Gent zien er <i>aantrekkelijk</i> uit.	☐	☐	☐	☐	☐	☐	☐
16. Het personeel van de Pediatrie in het UZ Gent is goed gekleed en komt verzorgd over.	☐	☐	☐	☐	☐	☐	☐
17. Het uitzicht van de fysische faciliteiten (aantrekkelijkheid, comfort en properheid van de wachtzaal, uitrusting, gebouwen en terreinen) van de Pediatrie in het UZ Gent is <i>in overeenstemming met het soort diensten dat ze aanbieden</i> .	☐	☐	☐	☐	☐	☐	☐
18. Wanneer de afdeling Pediatrie in het UZ Gent belooft iets te doen tegen een bepaalde tijd, dan doet ze dat ook.	☐	☐	☐	☐	☐	☐	☐

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Tussenin	Eerder akkoord	Akkoord	Helemaal akkoord
19. Wanneer U problemen heeft, dan is de Pediatrie in het UZ Gent vriendelijk en geruststellend.	☐	☐	☐	☐	☐	☐	☐
20. U weet wat U hebt aan de Pediatrie in het UZ Gent.	☐	☐	☐	☐	☐	☐	☐
21. De Pediatrie in het UZ Gent biedt haar diensten aan op de tijd waarop ze het belooft te doen.	☐	☐	☐	☐	☐	☐	☐
22. De afdeling Pediatrie in het UZ Gent houdt haar dossiers volledig en foutloos bij.	☐	☐	☐	☐	☐	☐	☐
23. De afdeling Pediatrie in het UZ Gent vertelt U niet altijd exact wanneer bepaalde diensten zullen uitgevoerd worden.	☐	☐	☐	☐	☐	☐	☐
24. U wordt niet altijd onmiddellijk bediend door het personeel van de Pediatrie in het UZ Gent.	☐	☐	☐	☐	☐	☐	☐
25. Het personeel van de afdeling Pediatrie in het UZ Gent is niet altijd bereid om U te helpen.	☐	☐	☐	☐	☐	☐	☐
26. Het personeel van de afdeling Pediatrie in het UZ Gent is te druk bezig om altijd onmiddellijk aan uw verzoeken te voldoen.	☐	☐	☐	☐	☐	☐	☐
27. U kunt het personeel van de Pediatrie in het UZ Gent vertrouwen.	☐	☐	☐	☐	☐	☐	☐
28. U voelt zich veilig in de omgang met het personeel van de afdeling Pediatrie in het UZ Gent.	☐	☐	☐	☐	☐	☐	☐
29. Het personeel van Pediatrie in UZ Gent is beleefd.	☐	☐	☐	☐	☐	☐	☐
30. Het personeel van de Pediatrie krijgt adequate steun vanuit het UZ Gent om hun werk goed te doen.	☐	☐	☐	☐	☐	☐	☐
31. De Pediatrie in het UZ Gent geeft U geen individuele aandacht.	☐	☐	☐	☐	☐	☐	☐
32. Het personeel van de afdeling Pediatrie in het UZ Gent geeft U geen persoonlijke aandacht.	☐	☐	☐	☐	☐	☐	☐
33. Het personeel van de afdeling Pediatrie in het UZ Gent weet niet wat uw behoeften zijn.	☐	☐	☐	☐	☐	☐	☐
34. De Pediatrie in het UZ Gent heeft niet het beste voor met U.	☐	☐	☐	☐	☐	☐	☐
35. De afdeling Pediatrie in het UZ Gent heeft geen openingsuren die voor U passen.	☐	☐	☐	☐	☐	☐	☐
36. In het algemeen is de dienstverlening van deze afdeling van een hoge kwaliteit.	☐	☐	☐	☐	☐	☐	☐

Hierna volgen uitspraken over hoe tevreden hoe bent met de afdeling Pediatrie in het UZ Gent. Duid de mate van tevredenheid aan.

	Helemaal niet tevreden	Niet tevreden	Eerder niet tevreden	Tussenin	Eerder tevreden	Tevreden	Helemaal tevreden
37. Hoe tevreden bent U met de communicatie (hoeveelheid informatie die gegeven wordt, begrijpbaarheid van de informatie, informatiedoorstroming...)?	☐	☐	☐	☐	☐	☐	☐
38. Hoe tevreden bent U met de toegankelijkheid van de afdeling (bezoekuren, bereikbaarheid..)?	☐	☐	☐	☐	☐	☐	☐
39. Hoe tevreden bent U met de tastbare aspecten van de afdeling (aantrekkelijkheid, comfort en properheid van wachtzaal, uitrusting, gebouwen en terreinen)?	☐	☐	☐	☐	☐	☐	☐
40. Hoe tevreden bent U met de veiligheid van de afdeling?	☐	☐	☐	☐	☐	☐	☐
41. Hoe tevreden bent U met de deskundigheid van het personeel en de onderlinge samenwerking?	☐	☐	☐	☐	☐	☐	☐
42. Hoe tevreden bent U met de manier waarop het personeel met U omgaat?	☐	☐	☐	☐	☐	☐	☐
43. Hoe tevreden bent U over de mate waarin men de behoeften van de patiënt begrijpt?	☐	☐	☐	☐	☐	☐	☐
44. Hoe tevreden bent U over de behulpzaamheid van het personeel?	☐	☐	☐	☐	☐	☐	☐
45. Hoe tevreden bent U met de zorgverlening?	☐	☐	☐	☐	☐	☐	☐
46. Hoe tevreden bent U met de betrouwbaarheid van de instelling (bijhouden dossiers en administratie, nakomen afspraken, eerlijkheid,...)?	☐	☐	☐	☐	☐	☐	☐
47. Hoe tevreden bent U over de mate waarin de instelling luistert naar en rekening houdt met uw klachten, opmerkingen...?	☐	☐	☐	☐	☐	☐	☐
48. In het algemeen, hoe tevreden bent U over de afdeling?	☐	☐	☐	☐	☐	☐	☐

Op de volgende pagina vindt U een aantal uitspraken omtrent de afdeling Pediatrie in het UZ Gent. Voor elke uitspraak kan U aangeven in welke mate U akkoord gaat. Kruis per uitspraak aan wat voor U van toepassing is.

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Tussenin	Eerder akkoord	Akkoord	Helemaal akkoord
49. De afdeling is hygiënisch en comfortabel ingericht en men vindt er gemakkelijk de weg.	☐	☐	☐	☐	☐	☐	☐
50. Er bestaan informatieve brochures over de verschillende onderzoeken.	☐	☐	☐	☐	☐	☐	☐
51. De dokters en het personeel stralen professionalisme en competentie uit.	☐	☐	☐	☐	☐	☐	☐
52. Patiënten worden behandeld met respect en waardigheid.	☐	☐	☐	☐	☐	☐	☐
53. Er wordt genoeg informatie gegeven over de werking van de afdeling.	☐	☐	☐	☐	☐	☐	☐
54. Er wordt onvoldoende informatie gegeven over de zorgverlening en de behandeling.	☐	☐	☐	☐	☐	☐	☐
55. Er worden duidelijke antwoorden gegeven op uw vragen.	☐	☐	☐	☐	☐	☐	☐
56. De informatie die vanuit de afdeling gegeven wordt, is steeds gemakkelijk te begrijpen en zeer duidelijk.	☐	☐	☐	☐	☐	☐	☐
57. Het personeel trekt genoeg tijd uit om dingen uit te leggen als dat nodig is.	☐	☐	☐	☐	☐	☐	☐
58. Het personeel is vriendelijk tegenover de patiënt.	☐	☐	☐	☐	☐	☐	☐
59. Er wordt steeds genoeg tijd uitgetrokken voor de patiënt.	☐	☐	☐	☐	☐	☐	☐
60. De manier waarop het personeel omgaat met de patiënten wekt vertrouwen.	☐	☐	☐	☐	☐	☐	☐
61. Het personeel heeft niet veel geduld met de patiënt.	☐	☐	☐	☐	☐	☐	☐
62. Het personeel heeft veel begrip voor de patiënt.	☐	☐	☐	☐	☐	☐	☐
63. De manier waarop het personeel met U omgaat wekt uw vertrouwen.	☐	☐	☐	☐	☐	☐	☐
64. Het personeel gaat op een warme en hartelijke manier om met de patiënt.	☐	☐	☐	☐	☐	☐	☐
65. Het personeel is steeds behulpzaam.	☐	☐	☐	☐	☐	☐	☐

Opmerkingen:

