To what extent is client satisfaction in youth care influenced by the way Dutch municipalities organize the commissioning of youth care?

Determining the influence of commissioning aspects and contextual factors on client satisfaction in youth care

Master Thesis

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PPRC PUBLIC PROCUREMENT RESEARCH CENTRE

UNIVERSITY OF TWENTE.

Summary

Introduction

Since 2015 Dutch municipalities are responsible for commissioning youth care services. Municipalities were made responsible to improve the provision of youth care. However, the number of complaints regarding youth care increased with 42% in 2016 compared to 2015. The increase in complaints in 2016 could be an indication that client satisfaction in youth care was declining. An increasing number of complaints could be linked to the way municipalities organize the commissioning of youth care. Dutch municipalities could choose to deliver youth care services themselves (in-house procurement) or contract another party for service delivery (outsourcing). Almost all Dutch municipalities outsourced these services and used the director model for the commissioning of youth care. This model consists of various aspects, including, reimbursement structure, contract duration/extension, inter-municipal cooperation, the extent to which clients can choose their preferred provider and municipal expenses.

Research objective

The objective of this research project was to determine to what extent client satisfaction in youth care was influenced by the way Dutch municipalities organize the commissioning of youth care. In addition, contextual factors were examined to gain insight into other possible determinants of client satisfaction in youth care. Literature was used to formulate hypotheses for commissioning aspects such as contract duration, reimbursement structure and inter-municipal cooperation. Furthermore, literature was used to identify additional determinants of client satisfaction in youth care. Based on this literature study a conceptual model of client satisfaction in youth care was constructed.

Method

The conceptual model of client satisfaction in youth care was tested using the results of four semi-structured interviews with professionals involved in the commissioning process of youth care and multiple regression analyses. For the analyses, datasets about commissioning aspects and client satisfaction from the Public Procurement Research Centre (PPRC) and I&O Research were used.

Results

In the multiple regression analysis of the contextual factors, a significant equation was found. Age and municipal size appeared to be significant predictors of client satisfaction in youth care. The results of the interviews showed that most of the respondents expected that the commissioning aspect would only have an indirect effect on client satisfaction and that the aspects mostly affect the care provider. The average client satisfaction was calculated to examine whether differences were present within the commissioning aspects. The results showed no major differences in average client satisfaction for any commissioning aspect. However, data on the commissioning aspects was insufficient and therefore no statistical analysis could be conducted.

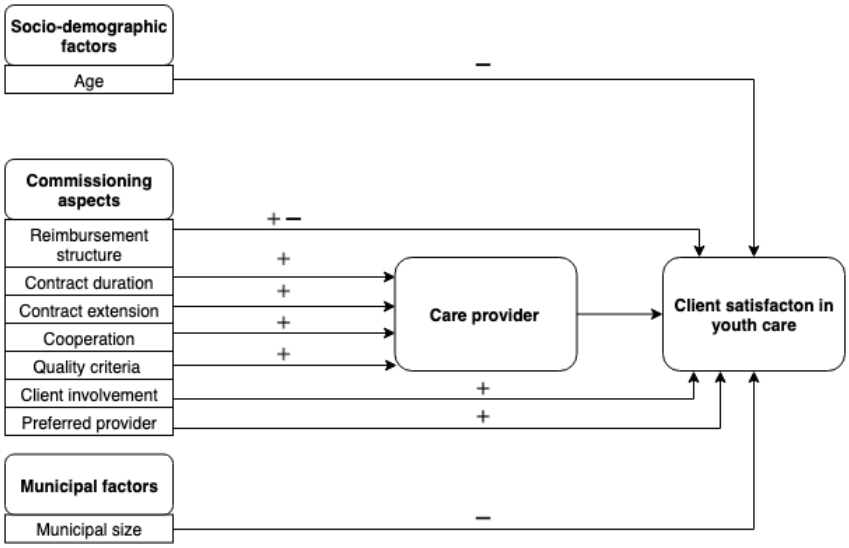
Conclusion

Based on the results of this study, it is difficult to state precisely to what extent the way municipalities organize the commissioning of youth care influences client satisfaction. Little variance in client satisfaction was explained by the contextual factors. Although no statistical analysis of the commissioning aspects could be conducted, this research does provide more insight into their expected effects on client satisfaction. The interviews show that commissioning aspects are expected to have an

indirect effect on client satisfaction and a direct effect on the care provider. In addition, the refined conceptual model for client satisfaction in youth care provides a good foundation for further research.

Discussion

Based on the results of the interviews and the statistical analysis of the contextual factors we were able to construct a refined conceptual model of client satisfaction in youth care. Only client satisfaction is included as an outcome measure in this model. However, other indicators could be included such as time, lower costs and prevention.



Refined conceptual model of client satisfaction in youth care.

Preface

Just over a year ago I was looking for a master assignment to conclude the masters Health Sciences and Public Administration at the University of Twente. During the master health sciences, I came into contact with finance and healthcare purchasing. This immediately caught my interest and I soon realized that I wanted to write a thesis on this subject. After taking the courses in Health Sciences, I also started taking the master's courses in Public Administration. Within this master, I chose to specialize in local and regional government. For my master assignment, I wanted to combine this specialization with my interest in healthcare purchasing. An old roommate brought me into contact with the Public Procurement Research Center (PPRC). After a conversation at the PPRC office with Prof. Dr. Telgen and Madelon Wind they offered me the opportunity to research the commissioning of youth care by Dutch municipalities. Within this research, my interest in healthcare purchasing and the local and regional government was perfectly combined.

At this moment I am busy processing the final comments and completing my thesis. Looking back at the past year, I notice that I have learned a lot from this experience. I have come across both the good and the bad sides of myself. Overall, I believe that I have developed myself on a personal level and that I am ready for the next step. Of course, I could not have done this on my own. First of all, I would like to thank PPRC for making my master assignment possible. In particular, I would like to thank Madelon Wind of PPRC for all the helpful suggestions and guidance during this period. Secondly, I would like to thank my supervisors from both courses Prof. Dr. Boogers and Dr. Ir. Schotanus. Your guidance and feedback helped me raise my thesis to a higher level. I would also like to thank I&O Research for making the data I needed for my research available. In particular, Leon Heuzels from I&O Research for his help whenever I had problems with my SPSS syntax. Finally, I would like to thank my family and friends who supported me during this sometimes difficult period.

Enjoy reading.

With kind regards,

Dirk Koehorst

Student Master Health Sciences and Public Administration

Enschede, October 22nd 2019

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1. Introduction

1.1. Background

Municipalities in the Netherlands took over the responsibilities of the provinces for all youth care services in 2015. This transition resulted in more tasks for the municipalities that needed to be carried out with a reduced budget (PPRC & NJi, 2018a). The initial goal of this transition was to make the youth care system more coherent and efficient (Bosscher, 2012). To achieve this the Dutch youth institute (NJI) identified five segments where municipalities had to focus on:

- Strengthen the problem-solving capacity of children and young people, their parents and social environment
- Enhance the parenting skills of the parents and the social environment
- Stimulate prevention and early detection
- Ensure timely provision of customized care
- Establish effective and efficient cooperation around families

The transition created a new situation for municipalities, in which they had to provide youth care services to their citizens. Municipalities could choose to deliver the services themselves (in-house procurement) or contract another party for service delivery (outsourcing). In the case of outsourcing, municipalities act as principals and contract healthcare providers to provide youth care services. Municipalities were able to choose various options for the design and the implementation of these contracts. This was made possible through the amendment of the ’Aanbestedingswet' in 2016. The amendment enabled municipalities to design tenders for social services (PPRC & NJi, 2018a).

As mentioned in the first paragraph the decentralization was intended to improve the provision of youth care. However, the number of complaints regarding youth care increased with 42% in 2016 compared to 2015 (Zorgvisie, 2017). In 2016, 10.862 clients contacted the ‘Advies- en Klachtenbureau Jeugdzorg" (AKJ) and 21.552 complaints were handled. In 2017, the total number of complaints remained almost at the same level (22.006). On the one hand, based on the increase of complaints in 2016 the assumption can be made that the satisfaction of the people that make use of youth care could be declining. On the other hand, the increase in complaints could be explained by the increasing demand for youth care. In 2015, 365.900 Dutch youths received youth care, wherein 2016 this number was 393.000 an increase of 7,4% (CBS, 2018). However, since the growth in demand was minor, in comparison to the substantial increase in complaints, this explanation seems unlikely.

An increasing number of complaints and the assumption that satisfaction among clients is decreasing could be linked to the way municipalities organize the commissioning of youth care. Municipalities need to establish agreements regarding the responsibilities and roles of healthcare providers. For example, municipalities need to determine the scope, content and funding of contracts for healthcare providers. These choices result in a certain commissioning model. According to the Public Procurement Research Center (PPRC), commissioning models can differ in focus. For example, they can purchase (contract) youth care based on an area, hours or results. These commissioning models are comparable with population-based funding (Naylor, 1999) and Performance-Based Contracting (Selviaridis & Wynstra, 2015).

PPRC researched which commissioning models are used by municipalities for purchasing customized services regarding the Social Support Act 2015 (in Dutch: Wet maatschappelijke ondersteuning [Wmo]) and individual services regarding the Youth Law (in Dutch: Jeugdwet). Additionally, PPRC looked at how municipalities organized this procedurally. PPRC found that the following models were used for the purchasing of Wmo and youth care services: the AWBZ model, population-based commissioning, the auction model, neighborhood teams and the director model. The focus of this thesis is on the purchasing of youth care and will not discuss the earlier mentioned Social Support Act. PPRC made a distinction between seven forms of youth care: dyslexia, mental health care, other outpatient help, daycare, foster care, residential care and forced frame. The research of PPRC was based on an integral analysis of purchasing documents of all Dutch municipalities (PPRC & NJi, 2018a). The results of the study showed that almost all Dutch municipalities use the director model for the commissioning of youth care. This model consists of various aspects and the effect of these aspects on client satisfaction in youth care will be examined in this study.

As mentioned earlier the content of a commissioning model used by a municipality can differ. For example, the way municipalities organize the commissioning of youth care may differ in the degree of freedom of choice for the client, the reimbursement structure, inter-municipal cooperation, municipal expenses and contract duration. There could also be other contextual factors that need to be included to identify possible determinants for client satisfaction, such as the size of municipalities, age, gender, the average income in a municipality, the degree of urbanity and the cultural background in a municipality (Batbaatar et al, 2017; Fitzgerald & Durant, 1980; Swianiewicz, 2002). These factors will be further discussed in Chapter 3.

1.2 Aim of the study

The decentralization of youth care in the Netherlands has not yet achieved the desired goals (ZonMw, 2018). Furthermore, clients have more complaints compared to previous years (Zorgvisie, 2017). This may be related to the way municipalities organize the commissioning of youth care. Heuzels (2017) conducted a study, where municipal commissioning approaches for social care were examined. The procedures used by municipalities for the commissioning of youth care and social care is the same, but the provision of youth care is much more complex compared to social care. The results from Heuzels (2017) indicate that there are differences between commissioning approaches for social care. However, not all differences between the approaches were statistically significant. This indicates that there might be other confounding variables. Where Heuzels (2017) examined differences between commissioning models, this study aims to gain insight into whether aspects of a certain commissioning model affect client satisfaction in youth care. Within certain frameworks, municipalities are free to choose how they organize youth care commissioning. It can be expected that this administrative freedom leads to differences between municipalities and that this directly or indirectly affects client satisfaction. Therefore, this study contributes to identifying the aspects that influence client satisfaction in youth care. In addition, by examining contextual factors this study aims to gain insight into other possible determinants of client satisfaction in youth care.

2. Problem Description

Before presenting the research question, a description of the Dutch healthcare market and the provision of youth care by municipalities is given to help understand these processes.

2.1 Dutch healthcare market

The healthcare market differs in many aspects from other markets (for example, manufacturing markets). Besides the fact that the other sectors mainly operate in the commercial market, some additional differences are related to the production processes. These differences mainly relate to the specific nature of the health care service, the special structure of the market and the role of actors active in the health market (Lapré & Van Montfort, 1999). There are sectors where the demand side of the market is both customer and buyer, but in the healthcare market, a third actor takes the place of the buyer. This is because clients in the healthcare market do not pay for service directly, but are insured for medical expenses. So, the buyer purchases care from the healthcare provider to ensure that the client will receive care. This interaction has been graphically displayed below (Heuzels, 2017).

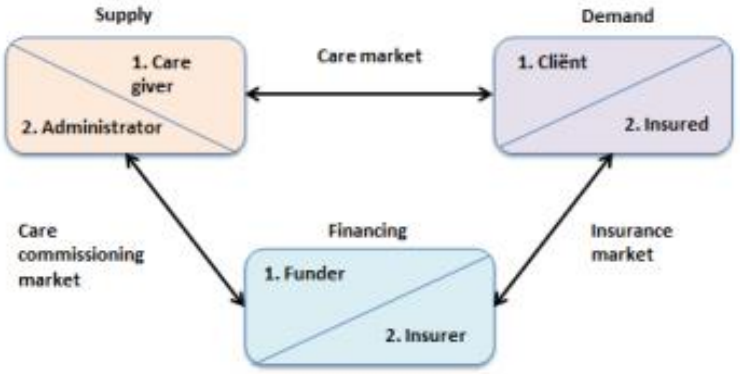

Figure 1. Three-market model for social care, based on Lapré and van Montfort (1999) (Source: Heuzels, 2017).

The figure shows a triadic relationship between the caregiver/administrator, client/insured and the funder/insurer. In the original model of Lapré and van Montfort (1999), the financing part is fulfilled by the funders/insurers and they operate on the insurance and funding market. The funder is actively involved with the caregiver and the client. The funder often does not pay the invoice to the client (insured), but the caregiver (hospital, home care organization). When this model is applied to youth care, the role of the funder is now occupied by the municipality and the funding market is replaced by the commissioning market. The three actors in the model function as a service triad. This triadic relationship implies that the choices made by one of the actors affect the other parties involved in the triad. This means that the choices municipalities make regarding the commissioning aspects will affect healthcare providers and clients.

2.2 Current process of providing youth care by municipalities

The first choice Dutch municipalities have to make is whether they want to provide this service themselves or if they want to outsource it to a third party. If Dutch municipalities opt to outsource, they can choose between a variety of instruments for contracting youth care providers. Instruments in this light

refer to how agreements between municipalities and youth care providers are established. Municipalities can choose from three instruments: government contract, open house and subsidy. Municipalities are only obliged to tender when they opt for a government contract (PPRC & NJi, 2018b).

If municipalities opt for a government contract or open house as an instrument, different procedures can be used for the selection of youth care providers. Municipalities most often use the following procedures: the multiple private tender, the classic tender, the dynamic purchasing system, the 'Zeeuws model', the dialogue focused procedure and performance purchasing. More procedures exist, but since these are hardly used, they will not be taken into consideration (PIANOo, 2018). The 'Zeeuws model', the dialogue focused procedure and the classic tender are most used by Dutch municipalities. Of these procedures, only the classical tender is a legally established procedure. The 'Zeeuws model' and the dialogue focused procedure are not legally established but in practice developed as an interpretation of the existing possibilities within the public procurement law (PPRC & NJi, 2018b). If municipalities choose subsidy as an instrument, other procedures are in place. Only 3% of the outsourcing is conducted through a subsidy and is therefore not taken into consideration (PPRC & NJi, 2018b).

After municipalities established which procedure they want to use, they must make choices on how they want to organize youth care. This includes agreements on the role and responsibilities of healthcare providers. For example, they need to determine the content, scope, responsibilities and funding of the contracts. This is called the model of commissioning and the results from the study of PPRC showed that for the purchasing of youth care the director model is mostly used by municipalities. However, municipalities can organize this model in different ways. For example, in terms of the reimbursement structure, freedom of choice by clients, inter-municipal cooperation and contract duration. The process of providing youth care by municipalities can be displayed graphically (Figure 2).

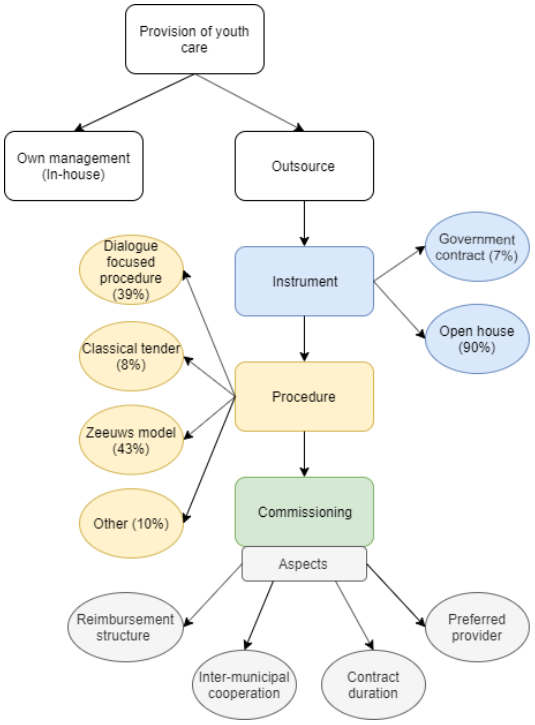

Figure 2. Process of providing youth care by municipalities.

2.3 Research questions

Given the information above, the following research questions have been formulated.

The main research question is described as follows:
To what extent is client satisfaction in youth care influenced by the way Dutch municipalities organize the commissioning of youth care?

To answer the main research question, the following six sub-questions are formulated:
1. How can we describe the concept of client satisfaction in youth care from literature?
2. How do municipalities organize the various commissioning aspects?
3. What is the level of satisfaction for each client?
4. What values do the contextual factors have for each client?
5. What is the effect of the commissioning aspects on client satisfaction in youth care?
6. What is the effect of the contextual factors on client satisfaction in youth care?

2.4 Outline of the research

In this section, a short description is given of the methods that were used to answer the research questions.

To answer sub-question one determinants of client satisfaction were derived from literature. Together with relevant aspects of the commissioning model, they formed a conceptual model for client satisfaction in youth care. To determine relevant aspects of the commissioning model, a literature study was conducted. In addition, four semi-structured interviews were conducted to ensure that every important aspect was taken into account. The respondents were professionals that were involved in the purchasing process of youth care. Based on their input and the literature, a selection of relevant aspects was made.

To answer sub-question two data on commissioning aspects was required. PPRC conducted an integral analysis of the purchasing documents of all Dutch municipalities and this data was used to see how municipalities organize commissioning aspects.

To determine the level of satisfaction for each client, and answer the third sub-question, a dataset of I&O Research was used. I&O Research conducted client satisfaction surveys in several Dutch municipalities in 2015, 2016 and 2017 regarding the provision of youth care.

To answer the fourth sub-question relevant contextual factors and their values needed to be included in the analysis. Data on these factors was collected by the researcher using available online data sources.

To answer sub-questions five and six descriptive statistics and multiple linear regression analyses were used. These analyses examined whether differences in commissioning aspects and contextual factors had a significant effect on client satisfaction. The results of these analyses were used to adjust the conceptual model of client satisfaction in youth care.

3. Theoretical Framework

This chapter elaborates on the theoretical perspectives that are used to analyse the research problem, the commissioning model that Dutch municipalities use and which outcome measures are used to determine the level of client satisfaction. This chapter concludes with a description of the commissioning aspects and contextual factors that have been investigated. For each aspect and factor, hypotheses have been formulated that serve as a foundation for the conceptual model.

3.1 Service triads

Through describing the Dutch healthcare market and the process of providing youth care (Chapter 2) it already became clear that municipalities outsource this service. This section will briefly discuss the concept of service triads to provide more context for the outsourcing of youth care services by Dutch municipalities. Li & Choi (2009) illustrate how service outsourcing differs from outsourcing in manufacturing. When outsourcing takes place in a manufacturing context, customers are typically not in contact with the buyer's supplier, but in a service context customers have direct contact with the buyer and supplier (Figure 3).

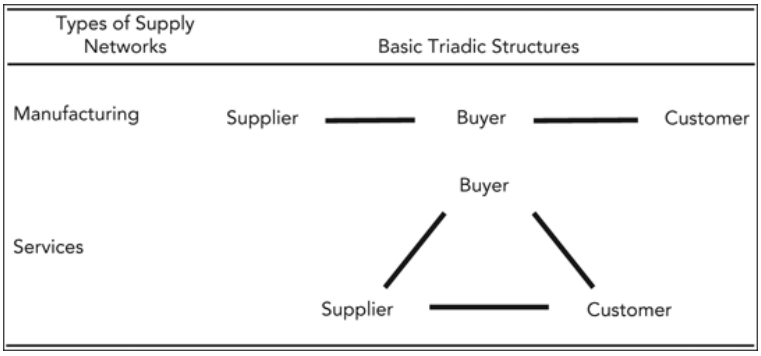

Figure 3. Comparison of Supply Chain Triadic Relationship Structures in Manufacturing vs. Services (Source: Li & Choi, 2009).

Within service triads, the problem may arise that the buyer cannot oversee the interaction between customer and supplier. It is therefore difficult for the buyer to monitor the quality of the provided services. Li & Choi (2009) proposed a solution for this situation in which, the buyer needs to maintain close communication with its customer and evaluate the performance of their supplier. Figure 4 shows a graphical representation of what this solution would look like.

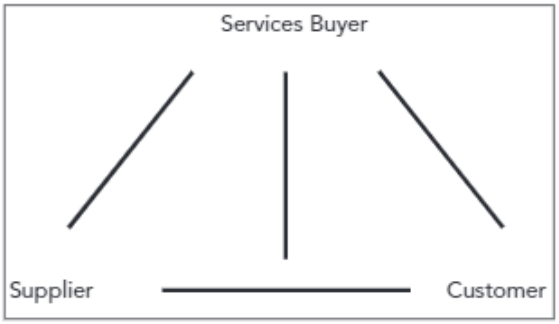

Figure 4. A proposed solution for monitoring problems in service triads (Source: Li & Choi, 2009).

The work of Li & Choi (2009) described a solution for the monitoring problems caused by service triads. Van Iwaarden & van der Valk (2013) also studied how organizations can gain more control over outsourced services. It is hard for organizations to control the phase in which the service is delivered. However, it is possible to manage service quality by taking measures in the pre- and post-service delivery phase (before and after service delivery) (Van Iwaarden & van der Valk, 2013). For example, municipalities can use certain contract types in the pre-order phase that help clarify their expectations of the youth care provider. Subsequently, through clarifying their expectations in the pre-order phase municipalities can evaluate the performance of the youth care provider in the ex-post phase.

3.2 Agency theory

In the previous section, the concept of service triads was used to give more context for the outsourcing of youth care services by Dutch municipalities (Li & Choi, 2009). Agency theory is often used to describe problems that occur within these service triads. Agency theory aims to clarify the interaction between agents and principles and their incentives. This section consists of a description of the basic principles of agency theory and how these can be applied to the outsourcing of youth care services by Dutch municipalities.

Agency theory is primarily focused on the ever-present agency relationship. In this relationship, there is one actor that assigns work (principal) and an actor that executes that work (agent) (Eisenhardt, 1989). Agency theory attempts to describe this relationship between the principal and the agent using the metaphor of a contract (Jensen & Meckling, 1976). The basis of agency theory was developed in the 1960s/1970s, when economists examined risk-sharing behaviour among individuals and groups (Eisenhardt, 1989). These economists stated that the problem of risk-sharing occurs when collaborating groups have different views towards risk. Agency theory attempted to widen this perspective of risk-sharing by incorporating the agency problem. Jensen and Meckling (1976) describe in their beginning theory of corporate ownership structure that the agency problems occur when collaborating parties have contrasting perspectives on goals and division of labour.

Within the relationship between principals and agents, two main problems arise. The first problem occurs when the goals and/or ambitions of the principal and agent differ and it is too complex and/or costly for the principal to validate the agent's actions (Eisenhardt, 1989). The main issue here is the fact that the principal is unable to verify whether the agent's behaviour has been appropriate. The second problem relates to risk-sharing and occurs when the principal and agent have contrasting perspectives concerning risk (Eisenhardt, 1989). The main issue here is that the principal might favour different actions compared to the agent because they both have contrasting risk preferences.

There are several perspectives from which we can look at agency theory. Ross (1973) looked at agency theory from an economic perspective. Zajac and Westphal (2004) used agency theory to describe a shift in corporate governance. Furthermore, agency theory has also been used in political science (Mitnick, 1973). These perspectives all differ from each other, but the most fitting for the context of this research is the sociology perspective (Shapiro, 2005). The sociology perspective aims to connect the social structure to types of principal-agent relationships. In addition, this perspective illustrates how different

combinations of monitoring, recruitment and sanctioning result in various administrative systems (Shapiro, 2005).

As mentioned earlier agency theory is often used to interpret problems that occur within service triads. Van der Valk and van Iwaarden (2011) studied how the principles of agency theory, as described above, can be applied to the concept of service triads. Van der Valk and van Iwaarden (2011) studied this by gaining more insight into the contracts and monitoring activities between buyer and supplier. According to van der Valk and van Iwaarden (2011) agency theory is based on three assumptions regarding whether suppliers will do what is in the best interest of their customers or whether they might show opportunistic behaviour. The first assumption relates to human nature and that factors like; self-interest, bounded rationality and differences in risk preference might explain why agents often do not act in the best interest of their principals. The second assumption is that information can be seen as a means of exchange. If agents and principals have different goals this may result in withholding information, generally indicated as information asymmetry. In contrast to the second assumption, the last assumption expects that goal alignment between principal and agent decreases the risk of opportunistic behaviour from the supplier. Taking into account the assumptions above, it is to be expected that outsourced services can be properly controlled if the right mixture of monitoring activities and contracts is being used (Van der Valk & van Iwaarden, 2011).

Agency theory gives us more insight into the problems that can arise between municipalities (principal) and youth care providers (agent). In addition, agency theory also provides insights into measures that municipalities can take to minimize the consequences of such problems. Agency theory is used in this study to formulate hypotheses and to explain the results of the analysis

3.3 Commissioning model: the director model

A vast majority of the Dutch municipalities use the director model for the commissioning of youth care. The other models known from the literature are not discussed, as they are hardly adopted by Dutch municipalities. A description of these models can be found in Appendix I.

The director model uses a director that has a conversation with the client on behalf of the municipality. In this conversation, the director maps the client's situation and the care needed (Telgen et al., 2014). Together they draw up a support plan, in which they mostly use: own strength, social network and general facilities of the client. The director has access to a catalogue if the client requires professional support (Telgen et al., 2014).

The director model uses standardized framework agreements with a wide range of healthcare providers (Uenk et al., 2018). The services in the catalogue have standardized terms and conditions. Clients can choose from a selection of healthcare providers that meet the terms and conditions and are contracted by the municipality. Budget agreements are not included in the framework, which causes healthcare providers to depend on clients choosing their provision of care services to reap revenue. Healthcare providers can be contracted for every service or even a subset of services in the catalogue (Uenk et al., 2018). Within the director model, municipalities can use two different reimbursement methods for healthcare providers. The first option is an input focused director model, where there is a fee-for-service

reimbursement. There is a standardized tariff for each of the services and this tariff corresponds with, for example, one hour of service. So providers are being reimbursed for their input (hours/dayparts) (Uenk et al., 2018). The second option is a model, where providers are reimbursed with an outcome-based bundled payment. In this model, each service corresponds with certain outcomes. For example, the client must be able to continue his or her daily activities. These outcomes can be defined in advance in the contract or they can be defined by a case manager and adjusted to the preferences of the client. This model does not focus on the input delivered by providers, but on the outcomes that providers need to achieve permanently or periodically (Uenk et al., 2018).

3.4 Commissioning aspects

Within the director model, municipalities still have to make certain choices on various aspects (reimbursement structure, contract duration, extension of contract). These choices might influence the quality of youth care. This was examined by looking at the choices that municipalities make and the differences in client satisfaction. This section discusses the different commissioning aspects which were derived from the dataset of PPRC and the literature. In addition, hypotheses were formulated for each aspect regarding their expected effect on client satisfaction.

3.4.1 Reimbursement structure

Municipalities use different reimbursement structures for commissioning youth care. Among others, municipalities can opt for fee-for-service financing, pay for performance financing or a combination of both. Fee-for-service financing is based on inputs, such as hours and dayparts. According to Ginsburg (2012), fee-for-service financing generally means that a provider receives a fee for a particular service from an insurer, the patient or another payer. The assumption here is that fee-for-service financing stimulates overproduction, which results in more care being delivered and therefore higher satisfaction. Performance-based financing focusses on outcomes that providers need to achieve permanently or periodically. Meessen et al. (2011) define performance-based financing as: *'a mechanism by which health providers are, at least partially, funded on the basis on their performance'*(p.153). An example of performance-based financing can be a youth care provider that must ensure that a child with behavioural problems can continue to go to school. Furthermore, performance-based financing can encourage prevention. By giving care providers financial incentives to focus more on prevention, it is possible to avoid high costs due to illness and being unable to work in the future (Cashin et al., 2014). By focusing more on prevention, it is possible that only clients with severe symptoms and illness still have to be treated. According to Batbaatar et al. (2017) patients with severe symptoms and illness were less satisfied with healthcare services. Therefore, prevention does not necessarily need to result in a higher level of satisfaction among clients.

Hypothesis: we expect that fee-for-service financing will lead to a higher level of client satisfaction in youth care compared to performance-based financing.

3.4.2 Contract duration and extension of a contract

Another aspect that may affect client satisfaction is the contract duration and the extension of contracts. Municipalities can determine the duration of the contract with the care providers. In addition, municipalities also determine whether there is an option to extend the contract. Continuity of care appears

to be a strong determinant of patient satisfaction (Batbaatar et al.,2017). Batbaatar et al. (2017) describe continuity of care as: '*the uninterruptedness of health service process from the same hospital, location, or provider and in which 'patient and the physician are cooperatively involved in ongoing health care management toward the goal of high quality, cost-effective medical care'*(p.94). Their systematic review found several studies in which continuity of care was positively correlated with patient satisfaction. Patients were more satisfied when there was a high continuity of care.

Hypothesis: we expect that longer contracts and the possibility of extension will lead to a higher level of client satisfaction.

3.4.3 Preferred provider

Municipalities can influence the degree to which clients can choose their preferred youth care provider. Prior research examined the relationship between the satisfaction of patients and the extent to which patients are free to choose their physician (Amyx et al., 2000). The results of this study showed that patients who were given the possibility to choose their physician but did not get the physician of choice were likely to be less satisfied. In addition, Simonet (2005) studied patient satisfaction under managed care arrangements in the United States of America (USA). Health maintenance organizations (HMOs) claim to control healthcare expenditures in the USA. However, many patients were dissatisfied with the quality of care that is delivered. Not being able to choose a healthcare provider was one of the main issues causing dissatisfaction among patients (Simonet, 2005).

Hypothesis: we expect that the larger extent to which clients in youth care can choose their preferred provider the more satisfied they will be.

3.4.4 Inter-municipal cooperation

Municipalities have to purchase seven forms of youth care in the Netherlands (ambulant: dyslexia, ambulant: mental health care, other outpatient help, daycare, residency: foster care, residency: residential care and forced frame). Municipalities can choose to cooperate with other municipalities to purchase each of these forms of youth care. It is possible that cooperative purchasing leads to a higher level of client satisfaction because it has numerous advantages. Advantages of cooperative purchasing include: learning from each other by sharing knowledge and experiences, reducing prices and risks and better product and service quality (Schotanus, 2007). For example, by sharing knowledge and resources it might be possible to purchase better service quality, then when a municipality purchases on its own. This improvement in service quality might result in a higher level of satisfaction among clients. On the other hand, it is also possible that cooperative purchasing results in a lower level of client satisfaction due to various disadvantages. These disadvantages include: supplier resistance, member commitment problems, disclosing sensitive information and high coordination costs (Schotanus, 2007). For example, 15 municipalities might decide to purchase youth care together. Concessions must typically be made with multiple parties involved, possibly resulting in sub-optimal contracts. This could then have a negative impact on the quality of the service that clients receive, which may result in a lower level of satisfaction. If a municipality chooses to purchase youth care by itself, this can lead to high transaction costs. Furthermore, the extent to which a client can choose their preferred provider may be limited when a municipality is not able to purchase on a large scale. These problems might be reduced through inter-municipal cooperation.

Hypothesis: we expect that inter-municipal cooperation will lead to a higher level of satisfaction and that satisfaction will increase as the size of the cooperation grows.

3.4.5 Client involvement

During the commissioning of youth care, municipalities can also determine to what extent clients are involved in the commissioning process. This shows a resemblance to the concept of patient-centred care. Patient-centered care has two main characteristics: the extent to which a patient is involved in the care process and the level of individualization of patient care (Robinson et al., 2008). Rathert et al. (2013) conducted a systematic review, where they examined the relation between patient-centered care and outcomes. Almost all of the studies that were included showed a positive relation between patient-centered care and satisfaction. However, according to Coulter & Dunn (2002) efficiency and productivity are vital in patient-centered care, but clinical personnel states that this decreases their ability to give patients the time and empathy that they need. This could negatively affect the satisfaction of the patients.

Hypothesis: we expect that if a client is more involved in the commissioning process, this will lead to higher client satisfaction in youth care.

3.4.6 Municipal expenses

Municipal expenses refer to the realized costs of municipalities for youth care per 1000 citizens. It is possible that municipalities that spend more on average per inhabitant can deliver better quality youth care, which results in a higher level of client satisfaction. On the other hand, it is also possible that in municipalities that spend a lot on youth care, many young people require this care, which explains the high level of expenditure and does not affect the quality of care. Beauvais & Wells (2006) reviewed the literature regarding the relationship between healthcare organization finances and quality. They found several studies in which expenses were positively associated with process and outcome quality. This suggests that healthcare organizations with higher expenses also provided a higher quality of care.

Hypothesis: we expect that client satisfaction will be higher in municipalities that spend more on average per inhabitant for the provision of youth care.

3.5 Outcome variables

This section focuses on conceptualizing the outcome measure. Within the delivery of youth care, there are several outcome variables such as the degree of prevention and the quality of life. However, these variables are beyond the scope of this research and the sole focus will be on the level of client satisfaction as an outcome variable. Literature was used to define client satisfaction and how this variable can be measured.

3.5.1 Client satisfaction

Before we can determine how to measure client satisfaction, the concept of client satisfaction needs to be clarified. There are multiple forms of satisfaction, for example, customer satisfaction, citizen satisfaction and patient satisfaction. Customer satisfaction is mostly determined by the customers' perception of the quality of service (Kim et al, 2004), where citizen satisfaction is mostly influenced by the expectations of

the customer (Lewis & Pattinasarany, 2009). Since the clients in the context of this study are both patient and citizen, a combination of both is needed to determine their level of satisfaction. In the next paragraphs, similarities and differences between both forms of satisfaction will be discussed.

Patients satisfaction is based on a scope of aspects and experiences (Cowing, et al, 2009). These aspects and experiences include a subjective perception of the service and care, the extent of personalized care, the expectations and psychosocial needs of the patient, and the eventual health outcome (Cowing et al, 2009). Patient satisfaction is frequently used to assess the quality of healthcare services (Batbaatar et al, 2017). Patients satisfaction surveys can be used to identify service factors that need improvement. They can give insight into patients' needs and consequently enable policymakers to make strategic changes. These changes can improve the effectiveness and quality of the healthcare service (Batbaatar et al 2017). Health quality indicators appear to be very strong and consistent determinants of patient satisfaction and can be seen in Table 2 (Batbaatar et al, 2017 and Fan et al, 2005). In addition, some patient-related characteristics also appeared to have a positive correlation with patient satisfaction (see Table 2). Other patient-related characteristics like marital status, religion and race had no clear correlation with patient satisfaction (Batbaatar et al, 2017).

Citizen satisfaction concerns the level of satisfaction regarding the performance of the local government (Van Ryzin, 2004). Since municipalities, in other words, the local government are now responsible for the provision of youth care it is possible that certain determinants of citizen satisfaction might also apply to client satisfaction in youth care. Various determinants of citizen satisfaction have already been examined in prior research. This prior research primarily focused on the provision of public services by the local government. Fitzgerald and Durant (1980) conducted a study regarding citizen evaluation and urban management. Their study found a correlation between citizen satisfaction and some citizen-related factors (cultural background, income, age, and city size). Besides, citizen-related determinants there are also social context factors that play a role in citizen satisfaction. Multiple studies found a correlation between social context factors, such as perceived political efficacy, perceived service access, the general assessment of the quality of local government and citizen satisfaction (Christenson & Taylor,1983; Brown & Coulter, 1983). Fitzgerald and Durant (1980) found another social context factor that affects citizen satisfaction, municipal cost/benefit was a key factor in explaining dissimilarities in citizen satisfaction. Municipal cost/benefit is the extent to which a person experiences that the local government provides an adequate level of benefits compared to the taxes it receives. On an overview of the determinants of patient and citizen satisfaction is given below (Table 1).

Health service quality factors	**Social context factors**	**Patient-related factors**	**Citizen-related factors**
Accessibility of care	Political efficacy	Age	Age
Efficacy/outcome of care	Perceived service access	Gender	Cultural background
Interpersonal care	General assessment of the quality of local government	Geographic characteristics	Income
Continuity of care	Municipal cost/benefit	Socio-economic status	City size
		(Perceived) Health status	
		Expectations	

Table 1. Determinants of patient satisfaction and citizen satisfaction.

Similarities can be found between the patient-related and citizen-related determinants (Table 2). However, there are also differences between these groups. For example, health status is a patient-related but not a citizen-related determinant. The health service quality indicators and the political attitude determinants also show some resemblance. For instance, patient satisfaction is affected by the efficacy of care and citizen satisfaction is affected by political efficacy. Access also seems to be a corresponding determinant for both forms of satisfaction. Given the similarities and differences, a synthesis of both forms is needed to describe the concept of client satisfaction. Client satisfaction is in this study defined as a combination of the perceived performance of the care provider and the effect the provided care has on the daily life of clients. This corresponds with the efficacy/outcome of care and the (perceived) health status of the client, both determinants of patient satisfaction (Table 2).

3.5.2 Patient Reported Outcome Measures (PROMs)

The section above described the concept of client satisfaction. This part elaborates on the instrument that is used for measuring client satisfaction. In the context of this study, patient-reported outcome measures (PROMs) seem the most appropriate instrument for measuring client satisfaction.

Patient reported outcome measures (PROMs) are questionnaires filled in by patients (in this case clients) to measure how they experience their functioning and wellbeing (Dawson, Doll, Fitzpatrick, Jenkinson & Carr, 2010). These questionnaires have already been standardised and validated. PROMs differ from other questionnaires, because they are based on outcomes, while other questionnaires mostly aim to measure how patients have experienced the care process. There are two types of PROMs, the first type measures the patient's' perception of their general health status (generic PROM) and the second type that measures the perception of their health relative to particular diseases and conditions (disease-specific PROM) (Dawson et al, 2010). Usually, both types are used, because disease-specific PROMs have more face validity and credibility and generic PROMs allow comparisons between conditions (Black, 2013). Furthermore, PROMs might also contain single questions indicating to what extent their health has changed through treatment and also questions regarding adverse complications.

As mentioned earlier PROMs are mostly being used to measure how patients experience their functioning and wellbeing. However, this study looks at satisfaction within youth care and clients in youth care are sometimes too young to indicate how they experienced their functioning and wellbeing. In these cases, the parents or guardian of the client can indicate how they have experienced the outcomes of the provided care. Shiling et al. (2016) state that PROMs can also be used for informal caregivers. An informal caregiver can be a family member, partner or friend. Informal caregiving is essential for the general outcome of treatment and therefore it is important to maintain the satisfaction among this group at an adequate level (Shiling et al, 2016).

In summary, PROMs can be used to determine the impact of healthcare interventions and are a useful tool for both clients and informal caregivers (Dawson et al., 2010; Shiling et al., 2016).

3.5.3 Contextual factors

The last section of the theoretical framework elaborates on the contextual factors that are included in this research. There are two categories with factors that are included in this research (Table 2). Literature was used to substantiate these factors and hypotheses were formulated for each factor.

Socio-demographic factors	Municipal factors
Age	Municipal size
Gender	Urbanity
	Average income in municipality
	Cultural background in municipality

Table 2. Included contextual factors

3.5.3.1 Socio-demographic factors

Table 2 shows a variety of patient and citizen related factors that influenced satisfaction. However, this study will only include age and gender as client-related factors, because those were the only factors on which data was available.

Age was identified as a factor that affected patient satisfaction in several studies (Batbaatar et al., 2017). The majority of these studies found that older patients were more satisfied with care. However, one of the studies showed that the youngest and the oldest age group had the highest satisfaction. In addition, Fitzgerald and Durant (1980) stated that elderly citizens were overall more satisfied with service delivery.

Hypothesis: We expect that when the age of clients increases the level of satisfaction increases as well.

Batbaatar et al. (2017) also reviewed gender as a possible determinant of patient satisfaction. However, the results of their systematic review showed that prior research was not conclusive. Some studies stated that women were more satisfied with health services, where other studies found that men were overall more satisfied.

Hypothesis: We expect satisfaction to be higher among males.

3.5.3.2 Municipal factors

Table 2 showed that client-related factors such as income, city size, cultural background and geographic characteristics are correlated with satisfaction. Data on these factors is only available on a municipal level resulting in the following variables: the size of municipalities, the average income of municipalities, the cultural background of municipalities and the urbanity of municipalities.

Smaller municipalities lack knowledge, experience and financial resources in the case of a decentralization (Boogers et al., 2009). However, this does not mean that the size of the municipality and the degree of effectiveness are interrelated. For example, small municipalities are more homogenous compared to large municipalities (Swianiewicz, 2002). This makes it easier to implement, for example, youth care policies that meet the preferences of a large part of the citizens. This indicates that there is an optimal size of local government. Swianiewicz (2002) states that the size of municipalities influences the satisfaction of citizens with regard to the provision of public services (Swianiewicz, 2002).

Hypothesis: we expect satisfaction to be lower in small and large municipalities and higher in medium-sized municipalities

The average income of municipalities refers to the average income of citizens in a certain municipality. Prior research showed that income was positively related to patient satisfaction (Batbaatar et al., 2017; Hall & Dornan, 1990). Patients with a higher income tended to be more satisfied with healthcare services. Bleich et al. (2009), expected that patients with a higher income would also have higher expectations, resulting in a negative effect on their satisfaction. However, patients with a higher income still tended to be more satisfied.

Hypothesis: We expect that when the average income in a municipality increases the level of satisfaction increases as well.

The level of urbanity of municipalities refers to the extent to which the citizens of a municipality live in a rural or urban area. Prior research is divided regarding the effect of urbanity on satisfaction. Studies showed that clients living in a rural district were more satisfied with health care services (Atkinson & Haran, 2005; Batbaatar et al., 2017). The assumption here was that in rural areas it is easier to make an appointment and that there was an older population, which resulted in a higher level of satisfaction. Other research indicated that citizen satisfaction was considerably lower in rural areas (Saich, 2007). The assumption here was that people in rural areas have considerably lower accessibility to services due to travel time and costs. However, the second assumption resulted from a study conducted in low and-middle-income countries and therefore the question is to what extent they can be applied to youth care services in the Netherlands.

Hypothesis: we expect clients living in a rural area to be more satisfied with youth care services.

The cultural background in a municipality refers to the percentage of citizens that have a non-Western background (excluding refugee groups). Fitzgerald and Durant (1980) found a positive correlation between Western cultural background and citizen satisfaction. Their results showed that citizens with a non-Western background were overall less satisfied with the provision of public services. However, Batbaatar et al. (2017) stated that there was no clear relation between cultural background and patient satisfaction, but their systematic review did find six studies in which ethnic minority groups were less satisfied compared to the majority.

Hypothesis: we expect that satisfaction increases as the percentage of non-Western citizens in a municipality decrease.

3.6 Conceptual model

We used prior research on conceptual models for health outcomes to construct a conceptual model for the client satisfaction in youth care, see Figure 5 (Fawcett & Ellenbecker, 2015; Ferrans et al., 2005; Mitchell et al., 1998). Fawcett & Ellenbecker (2015) constructed a conceptual model for population health outcomes, they assumed that there was a relation between the activities from the care provider and population health outcomes. Our conceptual model assumes that healthcare provider activities are a part

of the outcome variable, client satisfaction. In addition, Fawcett & Ellenbecker (2015) assumed that healthcare system factors, such as payers and policies are related to population health outcomes. Our conceptual model included commissioning aspects, which can be seen as part of the municipal youth care purchasing policy. Ferrans et al. (2004) and Mitchell et al. (1998) both constructed a conceptual model for quality health outcomes. Both studies included individual and environment characteristics in their conceptual model, which our model also incorporated by including socio-demographic and municipal factors. Based on this prior research and the hypotheses that were formulated, we constructed the conceptual model for client satisfaction in youth care (Figure 5). The hypotheses from Chapter 3 resulted in the following assumption for the conceptual model:

Assumption:

- Socio-demographic factors, commissioning aspects and municipal factors are related to client satisfaction in youth care.

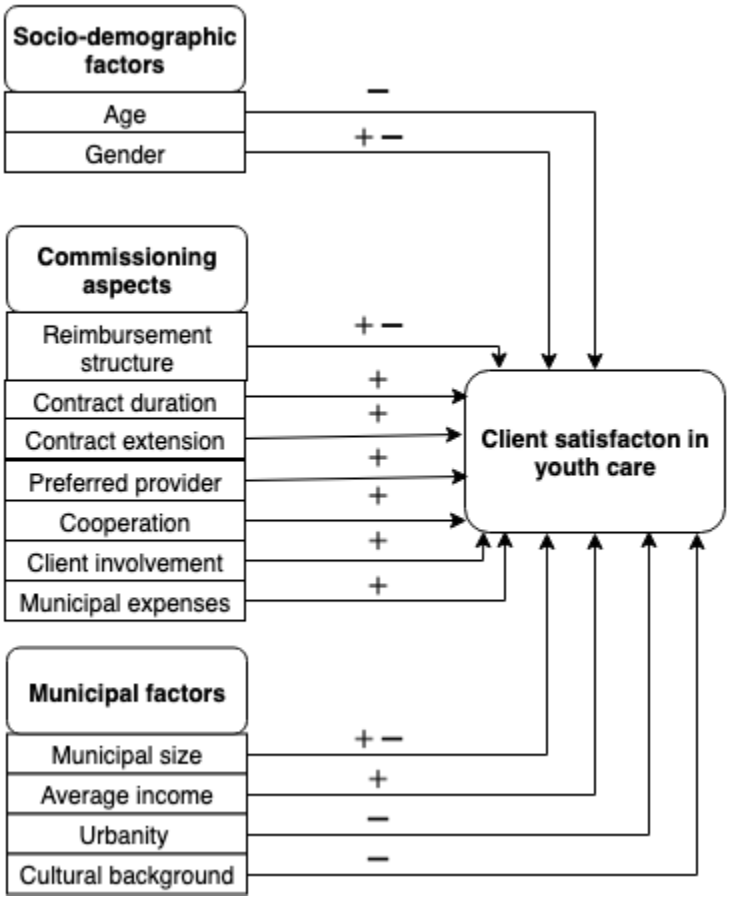

Figure 5. Conceptual model of client satisfaction in youth care.

4. Methodology

In this chapter, the concepts mentioned in previous chapters are operationalized by explaining the used methods. Specific attention was paid to the data collection and the data analysis.

4.1 Data collection

This section describes how the data was collected. Four semi-structured interviews were conducted to gather additional information about the commissioning aspects and adjust the conceptual model. Besides, this research used three different datasets. The first dataset was collected by PPRC and consisted of the choices Dutch municipalities made with regard to the commissioning aspects. The second dataset was collected by I&O Research, where they measured satisfaction among youth care users in 38 Dutch municipalities. The third dataset was collected by the researcher of this study and consisted of data regarding the contextual factors.

4.1.1 Semi-structured interviews

Four semi-structured interviews were conducted with professionals involved in the commissioning process of youth care. The data obtained from these interviews was used to refine the conceptual model of client satisfaction in youth care. Since a set of specific topics, which can be found in Appendix III, needed to be covered the format of the interview was semi-structured (Harrell & Bradley, 2009). The phases, as described by Harrell and Bradley (2009), were used to construct the interviews. However, the sampling phase was not included during the recruitment of the respondents. All respondents were employed by a purchasing organization that purchases youth care for cooperating municipalities. The respondents first received several general questions about the purchasing of youth care in their region. Then the respondents were asked questions about the commissioning aspects included in this research. The respondents could then indicate if they expected that the choices they make regarding these aspects affect the satisfaction of clients. Respondents were also able to add other aspects that were not initially included by the researcher. In addition, refining the conceptual model the data could also help to clarify the results from the data analyses. An overview of the respondents is given below (Table 3).

Interviewee	Position
Interviewee one	Project leader purchasing youth care
Interviewee two	Relationship and contract manager in the youth care purchasing module
Interviewee three	Purchaser and contract manager youth care
Interviewee four	Purchaser and contract manager youth care

Table 3. Overview of respondents.

4.1.2 Dataset PPRC

PPRC conducted an integral analysis of the purchasing documents of 380 Dutch municipalities. They prepared a database containing information about various aspects of the commissioning process for each form of youth care (ambulant: dyslexia, ambulant: mental health care, other outpatient help, daycare, residency: foster care, residency: residential care and forced frame). Since municipalities purchase seven forms of care separately and also do this in different ways, this research was limited to one of these forms. This research only focused on ambulant mental health care, because this is the most common form of youth care (NJi, 2014). In addition, this form of youth care is compatible with the questionnaire set out by

I&O Research, because the survey included the effects on the client's life and this is less suitable for, for example, ambulatory dyslexia.

PPRC mapped out several commissioning aspects (Table 4). First of all the dataset of PPRC consisted of inter-municipal cooperation aspects used by municipalities, which included whether cooperation was present and how many and which municipalities participated in the collaboration. Second, contract aspects used by municipalities, which included the starting year of the contract, contract form (for example a framework agreement), the duration of the contract and whether an extension of the contract was possible, degree of selectivity and the reimbursement structure (inputs or outcomes). The conceptual model also included choosing the preferred provider and client involvement as commissioning aspects. However, data on these aspects was not available beforehand and gathering this data was too time-consuming. Therefore, these two aspects were not included in further analyses.

Inter-municipal cooperation	Contract
Inter-municipal cooperation present?	Starting year
Number of municipalities in cooperation	Contract form
Who is in the collaboration?	Contract duration/extension
	Degree of selectivity
	Reimbursement structure

Table 4. Commissioning aspects identified by PPRC.

4.1.3 Dataset I&O Research

I&O Research carried out a survey in 2015, 2016 and 2017 (Table 5). This survey was filled out by clients or relatives from clients. The survey consisted of 6 subjects: accessibility of facilities, care provision, the effect of care on how a client is growing up, the effect of care on independence, the effect of care on self-reliance and effect of care on how a client can participate in the environment. Each subject consisted of several statements (Appendix II) and the clients or their relatives chose the answer that corresponded with their own experience. These subjects can be placed in three main categories, namely contact with the municipality, performance of care provider and experienced effects by the client. In total, the survey consisted of 26 questions.

The survey used a five-point scale for the categories ‘contact with the municipality’ and ‘experienced effects by the client’. Clients or relatives could also select the option ‘does not apply'. For the category ‘performance of care provider’ the survey used a four-point scale, where they left out the neutral answer. Municipalities were able to add additional questions in the survey, but these are not included in this study, for comparability purposes. In addition, the dataset of I&O Research already included municipal size and the level of urbanity for each municipality.

Year	Number of municipalities	Number of respondents
2015	35	3.773
2016	49	5.918
2017	38	5.993

Table 5. Response figures youth care satisfaction survey I&O Research (I&O Research, 2018).

The PPRC data was collected in 2018 and consisted mainly of contracts that were valid in 2017. To properly compare the different aspects of the commissioning of youth care the I&O data over the year 2017 and municipalities with contracts valid in 2017 were included in this research. However, several municipalities closed contracts in 2018 and were therefore not comparable with the data from I&O Research. As a result, 23 municipalities have been excluded from the research, resulting in fifteen municipalities with a total of 2050 respondents for the analysis.

4.1.4 Additional data

Additional data was collected by the researcher on the following contextual factors: the average income of municipalities and the cultural background within a municipality. This data was extracted from the Central Bureau of Statistics (CBS).

4.1.5 Combined dataset

The additional data was combined with the dataset of PPRC and I&O Research. The combined dataset included the commissioning aspects per municipality, the level of client satisfaction for each municipality and data on the contextual factors for each municipality. As mentioned earlier some municipalities in the dataset of PPRC closed contracts in 2018 and were not comparable with the data of I&O Research. Attempts were made to collect documents from before 2018 from the municipalities for which only data from 2018 was available. However, the documents that were accessible via Tenderned were not sufficient to include these municipalities. Therefore, the number of municipalities included in the combined dataset remained fifteen. These municipalities were anonymized in further analyses.

4.2 Data analysis

The second part of this methodology elaborates on how the combined dataset was prepared and which statistical methods were used for analysis. An exploratory factor analysis (EFA) was conducted to investigate the underlying constructs of the survey from I&O Research and provide loadings for each question of the survey. In addition, the Cronbach alpha test was used to examine the internal validity of the survey. Based on the EFA the level of satisfaction for each client was determined. These results were analysed using descriptive statistics and multiple linear regression analysis. An alpha of 5% ($\alpha = 0{,}05$) was used for this method.

4.2.1 Preparing the data

To conduct a proper analysis the data needed to be prepared. As indicated earlier, there were three main categories with a total of 26 questions in the I&O Research survey: experienced effects by the client, contact with the municipality and performance of care provider. These categories were not measured on the same scale. The experienced effects by the client were measured on a five-point scale where 1 equalled ‘completely disagree’ and 5 equaled ‘completely agree’. All other categories were equated with this scale. Contact with the municipality was measured on a five-point scale where 1 equaled ‘completely agree’ and 5 equaled ‘completely disagree’. The answer options for these questions were reversed to get the same scale. Performance of care provider was measured on a four-point scale where 1 equaled ‘completely agree’ and 4 equaled ‘completely disagree’. The answers to the questions regarding the performance of the care provider were divided by four and then multiplied by five to get the same scale.

Subsequently, a missing values analysis was conducted to check if certain questions had a high percentage of missing values. A missing value included a question that was not answered as well as the 'does not apply' option. Five questions regarding contact with the municipality and one question regarding the performance of the care provider were excluded from further analysis (around 40% missing values). The high percentage of missing values for questions about contact could be explained by the fact that the clients themselves have not had contact, but that their parents had done so. In addition, the question regarding the performance of the care provider had a high percentage of missing values, because this question was not included in the survey by every municipality.

4.2.2 Exploratory factor analysis (EFA)

To determine the satisfaction level for each client an exploratory factor analysis was conducted. An EFA reduces the number of variables into a smaller set of variables (Williams, Onsman & Brown, 2010). In addition, it can establish the underlying dimensions between variables and underlying constructs. An EFA explores the main dimensions of a large set of hidden constructs and can be used to generate a model or theory (Williams, Onsman & Brown, 2010). The twenty remaining questions were included in the EFA. The loadings provided by the EFA were used to determine the score of each question. These scores were summed and divided by twenty to get the average satisfaction level for each client. The average level of satisfaction was only calculated if the case had no missing values. All cases with missing values were excluded from further analysis. Furthermore, the lowest possible answering option was one and therefore cases with an average score below one were excluded. This resulted in a research population of 831 cases.

4.2.3 Cronbach alpha test

Internal validity of the survey was tested with the Cronbach alpha test. Cronbach alpha was developed to measure the internal consistency of a scale (Tavakol & Dennick, 2011). Cronbach alpha examines the extent to which all items in a scale measure the same construct and is therefore linked to the inter-relatedness of the items within the scale. Cronbach alpha can also be used to determine whether a sample of items is unidimensional. However, if a scale has multiple constructs it is not logical to determine the alpha for the entire test, because a higher the number of items will increase the value of alpha. Therefore, alpha was determined for each separate construct in the survey of I&O Research. The survey from I&O Research consisted of three main constructs: contact with the municipality, effects experienced by the client and performance of the care provider. I&O Research divided the construct effects experienced by the client in four sub-categories namely: the development of the client, the independence of the client, the participation of the client and the self-reliance of the client. Alpha was also determined for these sub-categories.

4.2.7 Multiple linear regression

To answer the main research question it was important to determine the overall effect the commissioning aspects and contextual factors have on client satisfaction in youth care. Multiple linear regression can be used to determine how much of the variance in the dependent variable can be explained by the independent variables. The level of client satisfaction was the dependent variable in this model, where the commissioning aspects and contextual factors were the independent variables. In a multiple linear regression, dichotomous and continuous independent variables can be entered directly. However, the dataset of this research had several nominal independent variables that consisted of more than two groups. These variables had to be dummy coded before they were included. Dummy coding is constructing a

dichotomous variable from a formerly qualitative variable (Hardy, 1993). The number of dichotomies that is needed equals G–1, where G represents the number of original categories. For example, the commissioning aspect contract duration has 3 original categories. The number of dichotomies needed then is 3–1= 2. These two dichotomies are then entered in the multiple linear regression. Multiple linear regression can also be used to simply predict, where the objective is to identify the linear combination of a set of predictors that provide the most accurate estimates of the dependent variable (Mason & Perreault, 1991). Subsequently, it is possible to identify individual predictor variables that have contributed to this prediction by assessing the size of the regression coefficients, the estimated standard errors and the related t-test probabilities (Mason & Perreault, 1991). With the use of these statistics, it was possible to test hypotheses about the effect of the contextual factors on client satisfaction.

5. Results

This chapter presents the results that were obtained from the analysis of the combined dataset and the semi-structured interviews that were conducted. The results have been divided into the results of the socio-demographic and municipal factors and the results of the commissioning aspects.

5.1 Socio-demographic and municipal factors

The first part of this chapter presents the results from the data analyses that have been conducted. First, the results from the exploratory factor analysis and the Cronbach alpha test are shown to determine the level of satisfaction for each client. Second, some descriptive statistics are presented regarding the average level of satisfaction in different municipalities. Third and last, the results from the multiple linear regression are presented to indicate the overall effect of the socio-demographic and municipal factors on client satisfaction in youth care.

5.1.1 Exploratory factor analysis (EFA)

All questions regarding contact with the municipality and one question of the performance of the care provider had already been excluded from further analysis (see Section 4.2.1). The remaining questions were analysed in the exploratory factor analysis (EFA). The EFA identified two factors. All the questions regarding the effects experienced by the client were classified as the first factor, where all the questions regarding the performance of the care provider were classified as the second factor (Appendix V). The EFA also provided the initial and extraction communality for each variable. The higher the communality the stronger the correlation. The communalities had a value of 0,54 or higher (Appendix V). The effects experienced by the client and the performance of the care provider were well defined by the two factors.

5.1.2 Cronbach alpha test

Internal validity of the survey from I&O Research was examined using Cronbach alpha test. I&O Research defined three main categories in their survey namely: effects experienced by the client, the performance of care provider and contact with the municipality. However, contact with the municipality was excluded from further analysis (See section 4.2.1). Therefore, alpha was determined for all constructs, the construct effects experienced by the client and the construct performance of the care provider[1]. In addition, alpha was determined for the four subcategories of the construct effects experienced by the client[2]. All constructs had a high alpha score ($\alpha = .80$ or higher). This indicated that the constructs measured what they should measure and that the reliability of the survey was high. However, there were three exceptionally high alpha scores[2]. This could indicate that there were items (questions) in this construct that are redundant because they measured the same question only in a slightly different way (Tavakol & Dennick, 2011).

[1] All categories, effects experienced by client and performance of care provider $\alpha = .95$
[2] Development of client $\alpha = .90$, independence of client $\alpha = .88$, participation of client $\alpha = .81$ and self-reliance of client $\alpha = .87$

5.1.3 Average satisfaction scores per municipality

In the survey from I&O Research clients indicated in which municipality they reside. The number of clients that participated in the survey of I&O Research and the average satisfaction scores for each municipality was determined (Table 6).

Municipality	N	Mean	Std. deviation
A	75	3.24	0.37
B	138	3.01	0.49
C	35	3.10	0.64
D	54	3.17	0.48
E	76	3.05	0.53
F	51	3.23	0.40
G	42	3.14	0.50
H	103	3.01	0.54
I	43	3.16	0.52
J	55	3.10	0.45
K	24	3.10	0.69
L	42	3.13	0.57
M	29	3.23	0.45
N	34	3.06	0.47
O	30	3.30	0.43
Total	**831**	**3.11**	**0.50**

Table 6. Average satisfaction scores for each municipality, scale 1-5.

Overall clients from municipality O gave the highest average satisfaction score (3.30), where clients from municipality B and H graded the care they received the lowest (3.01).

5.1.4 Multiple linear regression

A multiple linear regression was conducted to predict client satisfaction based on the contextual factors (Table 7).

Predictor variables	Standardized β coefficients	T	Sig
Gender	.029	.773	.440
Age*	-.116	-3.048	.002
Size 1	.072	1.572	.116
Size 3	-.049	-.702	.483
Size 4*	-.212	-2.056	.040
Urbanity 2	.017	.361	.718
Urbanity 4	.025	.531	.595
Cultural background 3	.081	.844	.399
Income 1	.108	1.297	.195
Income 2	-.049	-.775	.439
Income 4	-.014	-.315	.753

*Table 7. Regression analysis contextual factors, * indicates significance at the 5% level.*

A significant regression equation was found (F(11,735) = 3.077, p = .000), with an R^2 of .044.

$$clients\ predicted\ satisfaction = 3.278 + .029(Gender) - .016(age) + .094(size\ 1) - .058(size\ 3) - .237(size\ 4) + .033(urbanity\ 2) + .037(urbanity\ 4) + .098(Cultural\ background\ 3) - .103(income\ 1) + .028(income\ 2) - .010(income\ 4)$$ [3]

Age and municipal size appear to be significant predictors of client satisfaction. For each year that age increases client satisfaction decreases with .016. A graphical representation of this relation can be found in Appendix VI. A separate regression analysis was conducted for municipal size for hypothesis testing (Table 8). One dummy variable was omitted in the analysis for comparison (reference category).

Category	Unstandardized β coefficient	Sig.
Municipal size 4 (<100.00, reference category)		
Municipal size 3 (50.000 - 100.000)	.082	.104
Municipal size 2 (25.000 - 50.000) *	.100	.024
Municipal size 1 (>25.000) *	.197	.000

*Table 8. Regression analyses for hypothesis testing, * indicates significance at the 5% level.*

The results of this analysis showed that the satisfaction of clients who lived in a municipality with a population below 25.000 or between 25.000 and 50.000 significantly differed from that of clients who live in a municipality with a population above 100.000.

The results of the multiple linear regression showed that the initial model explains a very low percentage of the variance in client satisfaction (4,4%). To examine whether the model could be improved two additional multiple linear regression analyses were conducted. The EFA identified two factors from the questionnaire of I&O Research: the effects of the provided care as experienced by the client and the performance of the care provider (see Section 5.1.1). The client satisfaction score was based on these two factors. The results of the interviews indicate that the commissioning aspects that are included in this analysis, mainly affected the performance of the care provider (see Section 5.2.1). Therefore, the dependent variable client satisfaction was split into two new variables: client satisfaction regarding the effects of the provided care and client satisfaction regarding the performance of the care provider. For each of these dependent variables a multiple linear regression analysis was conducted (Table 9 and 10).

[3] where gender is coded as 1 = male, 2 = female, age is measured in years, municipal size 1 is coded as 1 = <25.000, 0 = other, municipal size 3 is coded as 1= 50.000 – 100.000, 0 = other, municipal size 4 is coded as 1= >v100.000, 0 = other, urbanity 2 is coded as 1 = moderately urban, 0 = other, urbanity 4 is coded as 1 = not urban, 0 = other, cultural background 3 is coded as 1= > 20 %, 0 = other, municipal income 1 is coded as 1 = 20.000 – 22.500, 0 = other, municipal income 2 is coded as 1 = 22.500 – 25.000, 0 = other, municipal income 4 is coded as 1 = 27.500 – 30.000, 0 = other.

Predictor variables	Standardized β coefficients	T	Sig	R^2 = .034
Gender	.013	.375	.708	
Age*	-.105	-2.989	.003	
Size 1*	.107	2.570	.010	
Size 3	-.039	-.651	.515	
Size 4	-.105	-1.145	.252	
Urbanity 2	.046	1.114	.265	
Urbanity 4	.036	.845	.398	
Cultural background 3	.041	.483	.629	
Income 1	.074	.972	.331	
Income 2	-.032	-.573	.567	
Income 3	-.007	-.175	.861	

*Table 9. Regression analysis client satisfaction effects, * indicates significance at the 5% level.*

Predictor variables	Standardized β coefficients	T	Sig	R^2 = .045
Gender	.017	.614	.540	
Age*	-.099	-3.489	.001	
Size 1	.022	.671	.502	
Size 3	.019	.378	.706	
Size 4	-.048	-.631	.528	
Urbanity 2	.055	1.597	.111	
Urbanity 4	.030	.875	.382	
Cultural background 3	-.214	-1.752	.080	
Income 1	-.026	-.255	.799	
Income 2*	-.212	-3.193	.001	
Income 3	-.160	-1.699	.090	

*Table 10. Regression analysis client satisfaction performance, * indicates significance at the 5% level.*

The results of the first regression showed a decrease in the explained variance (R^2 = .034) compared to the initial model (R^2 of .044). In addition, age and municipal size appeared to be significant predictors of client satisfaction effects. The results of the second regression showed an increase in the explained variance (R^2 = .045) compared to the initial model (R^2 of .044). By splitting client satisfaction into two new variables the predictive value of the model improved. However, this increase was relatively small and the overall predictive value of the model is still low.

5.2 Commissioning aspects

The second part of this chapter presents the results of the four semi-structured interviews that were conducted. The results will be used to adjust the conceptual model of client satisfaction in youth care (see Section 3.6). In addition, the average client satisfaction was determined for contract duration, contract extension, inter-municipal cooperation and reimbursement structure to examine whether differences are present within these aspects. The average client satisfaction was not determined for the remaining aspects, because there was no or insufficient data available.

5.2.1 Results semi-structured interviews and quantitative analysis

Respondents were asked how the purchasing of youth care is organized in their region, to see to what extent the regions differ in terms of structure. An overview of the characteristics of the regions where the respondents are employed are presented below (Table 11).

Region	Integrality	Tendering procedure	Reimbursement structure
Region 1	Wmo and youth care	Tendering procedure with framework agreements	Fee-for-service
Region 2	Wmo and youth care	Open House	Fee-for-service
Region 3	Youth care	Closed tender	Performance-based
Region 4	Wmo and youth care	Open House	Fee-for-service

Table 11. Characteristics of the regions.

Respondents were also asked to what extent the regions are concerned with client satisfaction and if they make agreements with care providers regarding client satisfaction. All respondents indicated that the individual municipalities within the region are ultimately and legally responsible for client satisfaction. All regions made an agreement with care providers that client satisfaction had to be measured.

Respondents were asked about the various commissioning aspects and whether they expect that the way their region organizes these aspects influences client satisfaction (Table 12). The municipal expenses aspect lacks an answer because this aspect was included in the interview format after the first interview was already conducted.

Commissioning aspects	No effect	Indirect effect	Direct effect	Hard to say
Contract duration	-	75%	25%	-
Contract extension	-	75%	25%	-
Inter-municipal cooperation	25%	75%	-	-
Reimbursement structure	-	-	25%	75%
Preferred provider	-	25%	75%	-
Client involvement	-	-	50%	50%
Municipal expenses	66,6%	33,3%	-	-

Table 12. Expected effects of commissioning aspects.

Contract duration and extension

Respondents generally expect that the contract duration and the option to extend the contract do not directly affect client satisfaction. However, three respondents did expect that contract duration and extension affects the care provider and thus have an indirect effect on client satisfaction. According to the respondents, this is mainly in terms of continuity and applies to both the client and the provider. Clients benefit from having the same care provider and care providers benefit from contract security. One of the respondents stated that by giving care providers this security, this might result in a more long-term vision and more investments from care providers. This could ultimately result in higher quality of care and thus higher client satisfaction. All respondents indicated that they believe that long-term contracts should be pursued because it gives care providers more security and the opportunity to invest in their organization. To examine whether differences were present within these aspects the average client satisfaction of municipalities using a contract duration of 12 months, 48 months and indefinite contracts was determined.

The average client satisfaction for these groups was respectively 3.11, 3.17 and 3.10. Given that the extension of contracts is linked to the duration of the contracts, the averages for this aspect are the same as that of contract duration. The results showed no major differences in average client satisfaction.

Inter-municipal cooperation

All of the respondents mentioned that the size of such collaboration is not likely to affect client satisfaction nor has an indirect effect. One of the respondents, that expected no effect, stated that the success of a collaboration depends on how well the municipalities work together and not the size of the collaboration. One of the respondents, that expected an indirect effect, indicated that since you are dealing with multiple parties, you often have to reach a consensus. This could then result in sub-optimal contracts. These sub-optimal contracts can influence the performance of the care provider and thus indirectly client satisfaction. Most respondents expected that inter-municipal cooperation has an indirect effect on client satisfaction in youth care. To examine whether differences are present within this aspect the average client satisfaction of the inter-municipal cooperations was determined. Four cooperations were identified in the dataset and the size of these cooperations was 3, 5, 14 and 17 municipalities. The average client satisfaction for these groups was respectively 3.01, 3.10, 3.13 and 3.17. The results showed no major differences in average client satisfaction, but there is a clear increase in satisfaction as the collaboration increases.

Reimbursement structure

The respondents were asked about whether the choice for a certain reimbursement structure would affect client satisfaction. One respondent expected that this would directly affect client satisfaction. This respondent mentioned that the reimbursement structure is an interesting incentive that municipalities can use. This respondent stated that you get more out of a care provider or organization that is intrinsically as well as eccentrically motivated to achieve the best for you than when they are only intrinsically motivated. The other three respondents were uncertain whether the reimbursement structure would affect client satisfaction. To examine whether differences were present within this aspect the average client satisfaction of municipalities using fee-for-service reimbursement and performance-based reimbursement was determined. The average client satisfaction for these groups was respectively 3.11 and 3.17. The results showed no major differences in average client satisfaction.

Preferred provider and client involvement

The respondents also received a question regarding the extent to which clients are free to choose their preferred care provider and if this would affect client satisfaction. Three respondents indicated that they expect this to have a direct effect on satisfaction. In addition, the respondents received a similar question with regard to the extent to which the client was involved in the entire commissioning process. Two respondents expect that client involvement has a direct effect on client satisfaction, where the other two respondents find it hard to say. All the respondents said that it is difficult to involve clients more in the process. Especially since you are dealing with a very specific target group that is difficult to motivate. Therefore, it is hard to gather viable input from this group. Nevertheless, all respondents believe it should be feasible. One of the respondents expected that involving clients more in the process will directly affect their satisfaction.

Municipal expenses

The respondents were asked if they expected that the amount a municipality spends on youth care would affect client satisfaction. Generally, the respondents expected that the amount municipalities spend on youth would not affect client satisfaction. One of the respondents that expected no effect stated that it is more important if someone gets the help that they need regardless of the costs of that help. Another respondent expected that it even might have a negative impact on satisfaction. One of the respondents expected that municipal expenses would indirectly affect client satisfaction. The respondent stated that municipalities that are tight on costs are also tight on time. Receiving less time as a client might negatively influence their satisfaction.

Additional aspects

The respondents were allowed to present additional aspects that they expect could affect client satisfaction. One of the respondents mentioned involving clients more in the purchasing process. The other three respondents indicated that quality criteria should also be included. The respondents indicated that they would incorporate more quality requirements in the contracts with the care providers. For example, it can be included in the contracts that a quality manual is present and that employees require certain certification. According to the respondents, municipalities are then responsible for monitoring whether care providers are complying with these agreements.

6. Conclusion

This chapter translates the results of the analysis and the discussion into conclusions that answer the main research question and the sub-questions regarding the effects of the commissioning aspects and contextual factors.

6.1 Main research question

The main research question to be answered in this study was:

''To what extent is client satisfaction in youth care influenced by the way Dutch municipalities organize the commissioning of youth care?''

Based on the results of this study, it is difficult to state precisely to what extent the way municipalities organize the commissioning of youth care influences client satisfaction. This is partly due to several limitations of this study, which will be discussed in Chapter 7. However, the fact that data analysis yielded few relevant results does not need to indicate that how municipalities organize the commissioning of youth care has no influence on client satisfaction. The results of the interviews imply that the way municipalities organize the commissioning of youth care do indeed affect client satisfaction. The respondents expected that the commissioning aspects mainly affect the care provider and only have an indirect effect on client satisfaction. Furthermore, it has not been examined whether commissioning aspects have an effect on other indicators besides client satisfaction. Based on these findings a refined conceptual model for client satisfaction in youth care can be constructed (see Figure 6).

6.2 Effect of socio-demographic and municipal factors

In Chapter 3, hypotheses were formulated that described the expected effect of the socio-demographic and municipal factors on client satisfaction in youth care. The hypotheses for these factors were confirmed or rejected based on the results of the data analysis (Table 13).

Factor	Hypothesis	Outcome	Effect
Age	*We expect that when the age of clients increases the level of satisfaction increases as well.*	Rejected	As age ↑ satisfaction ↓
Gender	*We expect satisfaction to be higher among males.*	Rejected	No effect
Municipal size	*We expect satisfaction to be lower in small and large municipalities and higher in medium-sized municipalities*	Rejected	As municipal size ↓ satisfaction ↑
Municipal income	*We expect that when the average income in a municipality increases the level of satisfaction increases as well.*	Rejected	No effect
Urbanity	*We expect clients living in a rural area to be more satisfied with youth care services.*	Rejected	No effect
Cultural background	*We expect that satisfaction increases as the percentage of non-Western citizens in a municipality decrease.*	Rejected	No effect

Table 13. Confirmed and rejected hypotheses.

Municipal size and age were identified as significant predictors of client satisfaction in youth care but had a different effect than was initially expected (Table 7). Changes in these factors were associated with shifts in client satisfaction. This indicates that there is sufficient evidence that these aspects will have an effect at the population level. The assumption can be made that younger clients are more satisfied compared with older clients and clients living in smaller municipalities are more satisfied compared to clients living in larger municipalities. Based on the results of this study age and municipal size can be identified as determinants of client satisfaction in youth care. These findings have been used to refine the conceptual model of client satisfaction in youth care (see Section 7.3).

6.3 Effect of commissioning aspects

In Chapter 3, hypotheses were formulated that described the expected effect of the socio-demographic and municipal factors on client satisfaction in youth care. It was intended that these hypotheses could be confirmed or rejected through statistical analysis. However, the data turned out to be insufficient for this analysis. Therefore, no conclusions can be drawn from a statistical analysis. It is, however, possible to say something about the expected effect of the commissioning aspects based on the results of the interviews. Based on those results, it can be concluded that the commissioning aspects that have been included in the analysis are likely to have an indirect effect on client satisfaction. In addition, the results of the interviews also indicated that the commissioning aspects included in the analysis are expected to have a direct effect on the care provider. These findings have been used to refine the conceptual model of client satisfaction in youth care (see Section 7.3).

7. Discussion

This chapter discusses how the findings of the research can be explained in light of the expectations based on agent theory- and service-triad theory and the literature that was used to substantiate the hypotheses that have been formulated. Based on the results and the discussion of this study a refined model of client satisfaction in youth care was constructed. Furthermore, a short description of the strengths and limitations of this research is given. This chapter concludes with some propositions for future research.

7.1 Contextual factors

Socio-demographic factors

From literature, a hypothesis was formulated in which it was expected that as age increases, client satisfaction would as well (Batbaatar et al., 2017). However, the results of the regression analysis indicate the opposite. An explanation might be that the literature on which the initial hypothesis was based on is a systematic review of the determinants of patient satisfaction. The research population in the review consisted mainly of adults and elderly patients (Batbaatar et al., 2017). As the research population in our study consists of adolescents, it is possible that the results of the systematic review may not be applicable to this study. Our results showed that younger clients are more satisfied. This could be explained by the possibility that as clients get older they become more critical about the care they receive. In addition, it is also possible that an informal caregiver has completed or helped with filling in the questionnaire, which can be more critical about the care provided for their family or friends. Garland et al. (2007) also emphasized that youth service satisfaction is complicated because there are two potential clients (youth and parent). It is interesting to further investigate the differences between these two groups.

Municipal factors

It was expected that there was an optimal municipal size that would lead to the highest client satisfaction. Smaller municipalities were expected to lack knowledge, experience and financial resources in the case of decentralization and that this would lead to lower satisfaction (based on Boogers et al., 2009). However, the results indicate that client satisfaction is higher in smaller municipalities compared to large municipalities. This might be explained by the fact that all municipalities in this study jointly purchase youth care. By making use of the knowledge, experience and financial resources of the other municipalities in the cooperation, smaller municipalities can compensate for their expected shortcomings. By purchasing together, but continuing to implement the policy at an individual level, smaller municipalities reduce their disadvantages while retaining the advantages of being a smaller municipality. From this assumption, it would, therefore, be expected that this is also related to the degree of inter-municipal cooperation. Although the results showed no significant differences in the average client satisfaction for this commissioning aspect, an upward trend was visible. As the size of the cooperation increased so did the average client satisfaction for a small extent. This might be an indication that there is a correlation between municipal size and inter-municipal cooperation and could be examined in future research.

7.2 Commissioning aspects

Contract extension and duration

It was expected from the literature that longer contracts and the possibility of extending the contract with care providers would contribute to the continuity of care, one of the determinants of patient satisfaction. The reason that this expected effect is not expressed in the results could be explained by a several insights that emerged in the interviews. According to the respondents, these aspects mainly affect the care provider and not the client. The respondents expected that these aspects will have an indirect effect on clients and that their satisfaction is hardly affected by it (see Section 5.1.1). Time may be a factor that is of influence here. In this study, client satisfaction was observed or measured once and at the same time. Because this study did not include multiple measurements at different times, it is possible that the effects of continuity of care were not fully expressed at that time. This assumption is substantiated by Cabana & Jee (2004). They examined whether continuity of care improved patient outcomes. The articles included in their study had a limited time frame, where the longest study was 2 years. They stated that it is possible that the effects of continuity of care only become noticeable after a longer period of time or after more visits with the same care provider. Time is, therefore, a factor to be taken into account. In addition, this study only examined the effect of commissioning aspects on client satisfaction. However, contract duration and extension may also affect other indicators that not have been included in this research such as costs and prevention. Based on these findings and insights we adjusted the initial hypothesis for contract duration and extension.

Adjusted hypothesis: we expect that longer contract duration and extension indirectly results in a higher level of client satisfaction and that these aspects also have an effect on other indicators such as costs and prevention.

Inter-municipal cooperation

It was expected that clients covered by large cooperations would be more satisfied. However, the results were inconclusive with regard to this hypothesis. Since cooperative purchasing has several advantages and disadvantages (see Section 3.4.4), it might be difficult to determine which aspect of cooperative purchasing influences client satisfaction in youth care. In the interviews, respondents indicated that they primarily expected the extent to which municipalities can work well together to be important. To gain a better understanding of this, the different forms of cooperative purchasing groups in youth care should be classified and analysed. This could be examined with the highway matrix (Schotanus & Telgen, 2005). According to this study clear classification is important, since advantages, disadvantages and success factors may differ for the various forms of cooperative purchasing in the public sector. In one of the interviews, the respondent gave the example of a cooperative purchasing group consisting of one large municipality and several small municipalities. According to the respondent, the large municipality possessed the power in this cooperation and also determined the policy that was pursued. This form of vertical hierarchy can lead to a principal-agent relationship between the large municipality and the smaller municipalities. The resulting vertical hierarchy can, in addition, entail the problems associated with agency theory such as goal alignment and information asymmetry (see Section 3.2). By identifying the cooperative purchasing form, it is easier to resolve problems such as goal alignment and information asymmetry. This assumption is substantiated by McCue & Prier (2008). They used agency theory to model cooperative public purchasing. It was stated that agency theory can be used to identify the various incentives of the stakeholders in the cooperation. They expect that this will subsequently increase

efficiency, effectiveness and accountability. Based on these findings and insights we adjusted the initial hypothesis for inter-municipal cooperation.

Adjusted hypothesis: we expect that inter-municipal cooperation indirectly affects client satisfaction in youth care and this is not related to the size of the cooperation.

Reimbursement structure

From an agency theory perspective, it was expected that fee-for-service financing would lead to higher customer satisfaction compared to performance-based financing. In the fee-for-service method, healthcare providers can withhold information and deliver more care than is necessary. Resulting in clients receiving more care than they need, which can lead to an increase in satisfaction. On the other hand, it is also possible that financing based on results will lead to a higher level of client satisfaction because it gives youth care providers an incentive to deliver a higher quality of care. Neither of these assumptions could statistically be analysed. Only one of the included municipalities used performance-based financing for the commissioning of youth care. If it were possible to compare several municipalities that used this reimbursement structure, the results of the analysis could show the expected effect. Furthermore, most respondents indicated in the interviews that they found it difficult to predict the expected effect of the reimbursement structure. The respondents indicated that performance-based reimbursement could be an interesting incentive for care providers, but that it is important to describe the result very clearly when using this reimbursement structure. If this is not the case, it becomes difficult to determine whether the predetermined goal has been achieved. Given that youth care is complex, it is more difficult to describe a clear result compared with, for instance, social care. Two hours of domestic help, for example, is more measurable than the progress of a child with autism. The complexity of youth care and the difficulty of determining the result might cause clients to receive insufficient care through performance-based reimbursement. This might have a negative impact on their satisfaction. This could also be a reason why municipalities mainly use fee-for-service reimbursement. Based on these findings and insights we retain the initial hypothesis for reimbursement structure.

Hypothesis: we expect that fee-for-service financing will lead to a higher level of client satisfaction in youth care compared to performance-based financing.

Additional aspects and outcome measure

The results of the interviews showed that three out of four respondents indicated that they expect that making quality agreements to be of influence. Respondents indicated that such quality agreements can be included in the contracts with care providers. Establishing this monitoring function through contractual agreements corresponds with the results from the study of Van Iwaarden & van der Valk (2013). This study stated that organizations can take measures in the pre- and post-service delivery phase (Iwaarden & van der Valk, 2013). It is therefore interesting to test whether these quality agreements in contracts with youth care providers reduce problems that occur within service triads.

Outcome measure

It is important to discuss the outcome measure that was used in this research. One of the respondents stated in the interview a client satisfaction score of six with one care provider may have much better quality than a client satisfaction score of eight with another care provider. This caused by the fact that

care providers use different methods to measure client satisfaction. This makes it difficult to compare care providers with each other. Furthermore, one of the respondents stated in the interview that satisfaction also depends on the form of youth care clients received. It is to be expected that clients who are forced to be admitted are less satisfied than clients who receive dyslexia help for instance. It can, therefore, be questioned whether only using average client satisfaction for all types of youth care as an outcome measure is enough to assess the provision of youth care services. One of the respondents indicated in the interviews that one measurement method should be implemented nationally. This ensures that healthcare providers can be better assessed in terms of client satisfaction. In addition, there may be other indicators that must also be taken into account when assessing the provision of youth care services. For example, prevention and time might be indicators that should be included. Prevention might affect the reimbursement structure that municipalities choose for the commissioning of youth care (Cashin et al., 2014). Time might influence the extent to which the effects of the commissioning aspects can be observed (Cabana & Jee, 2004). The expected effects might only become apparent after a few years. We expect that by including additional commissioning aspect and indicators we can better assess the provision of youth care services.

7.3 Refined conceptual model of client satisfaction in youth care

Taken into account all of the above it is possible to construct a refined model of client satisfaction in youth care (Figure 6[4]). The initial model was derived from literature (see Chapter 3.6). In the refined conceptual model, only socio-demographic and municipal factors were included that proved to be significant predictors of client satisfaction in youth care. Furthermore, municipal expenses are no longer included in the commissioning aspects and most aspects no longer have a direct effect on client satisfaction, but on the care provider. Based on the results of the interviews only the reimbursement structure, the extent to which the client can choose their preferred provider and the extent to which they are involved in the commissioning process are commissioning aspects that are still expected to directly affect client satisfaction. Furthermore, the commissioning aspect of quality criteria has been added to the conceptual model. The expectation is that this aspect will indirectly affect client satisfaction in youth care. Only client satisfaction is included as an outcome measure in this model. However, other indicators could be included such as time, lower costs and prevention.

[4] Client involvement and preferred provider were not included in the quantitative data analysis because there was no data available on these aspects. They are still included in the refined model based on the results of the semi-structured interviews.

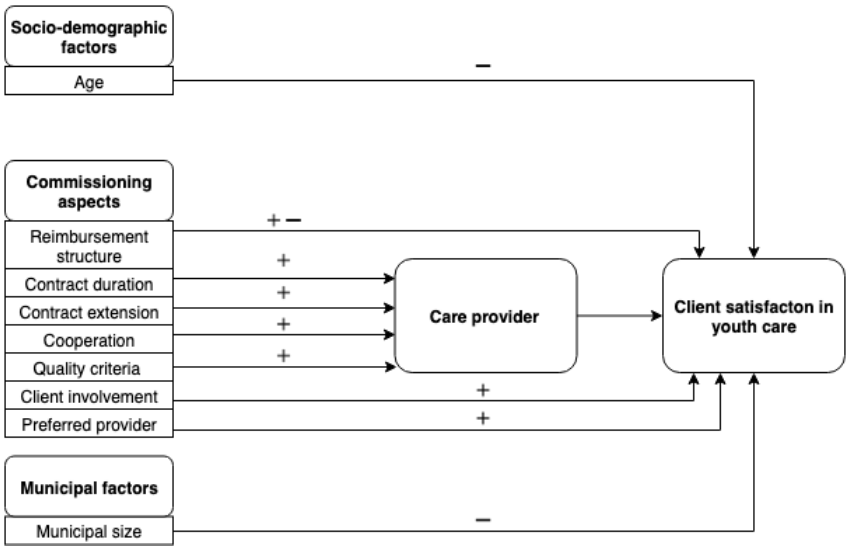

Figure 6. Refined conceptual model of client satisfaction in youth care.

7.4 Strengths and limitations

Strengths

Previous research has been conducted into whether certain commissioning models have an impact on clients who received social care. However, this was the first study that examined specific aspects of these commissioning models and how this related to the satisfaction of clients that received youth care. Based on the statistical analysis of the contextual factors, we have been able to identify some determinants of client satisfaction in youth care. Although no statistical analysis could be conducted with regard to the commissioning aspects, this research does provide more insight into their expected effects. Based on the results from the analysis of the contextual factors and insights gained from the interviews, we were able to construct a refined conceptual model for client satisfaction in youth care. Furthermore, additional indicators to assess the provision of youth care were identified. Together this provides a good foundation for further research.

Limitations

The main limitation of this study is caused by specific municipalities that were included in this study. A total of 15 municipalities were included and of these municipalities, 12 jointly purchased youth care. This resulted in a data set where there was little variation in the way municipalities organize the commissioning of youth care. This can, therefore, explain why the quantitative results of this study do not indicate that the way municipalities organize the commissioning of youth care influences client satisfaction.

The I&O Research questionnaire was initially designed for another type of research. As a result, certain important information has not been collected. For example, it has already been stated that Dutch municipalities must purchase seven different forms of youth care. In the questionnaire, clients did not have to indicate which form of youth care they received. Therefore, it was not clear which form of youth care the clients in this study received. As a result, while determining the satisfaction of these clients, it

was not possible to take into account factors as the severity of their condition and the level of specialized care they received. This may have been a factor that influenced the results of this study.

7.5 Propositions for future research

This chapter concludes with several propositions for future research. First of all, future research should include more regions that purchase youth care. The main limitation of this study was caused by the fact that too few different regions were included. Including more regions results in a dataset where there is more variety in how the commissioning aspects are organized. This increases the reliability and validity of the research. In addition, the type of youth care a client received should also be included. The severity of youth care varies widely, from dyslexia to compulsory care. By determining the type of care that was received, the outcomes of future research can be corrected for the severity of care.

Secondly, data was not available for all commissioning aspects included in the conceptual model of client satisfaction. Data on the extent to which clients were able to choose their preferred provider and the extent to which clients were involved in the commissioning process was not available. Several respondents also indicated in the interviews that they expect that these aspects can have a direct impact on client satisfaction (Table 8). These aspects should be included in future research.

Third, future research should also include care providers. This research only focused on the municipalities and the clients, but the results of this study indicate that care providers also play an important role in the entire process. How care providers experience the effects of the commissioning aspects and what their perspective is of client satisfaction and how this should be measured, is something that can be examined in future research.

Fourth and last, future research should incorporate more indicators. This research only included client satisfaction as an outcome measure. However, other indicators such as prevention, costs and time should also be included to better assess the provision of youth care services.

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Appendix

Appendix I Commissioning models

AWBZ model

AWBZ refers to the 'General Act Special Health Care Cost'(In Dutch: Algemene Wet Bijzonder Ziektekosten), which until 2015 was used to regulate social care services in the Netherlands (Uenk et al., 2018). In this model, the municipalities apply the same strategy that was used before the decentralization took place (Telgen, Uenk & Lohmann, 2014). The table below gives an overview of the advantages and disadvantages of the AWBZ model.

Clients	**Municipalities**
+ No adjustments compared to the previous situation	+ Fast implementation + Easy, using existing structures - Financially not feasible (certainly not in the long-term) - Results in lack of knowledge and experience

Advantages and disadvantages of the AWBZ model (Telgen et al., 2014).

Population-based commissioning

In population-based commissioning, a municipality is divided into districts (Telgen et al., 2014). Then one or more healthcare providers are contracted for this entire district. These healthcare providers receive the entire budget for this district and have to arrange everything themselves. The table below gives an overview of the advantages and disadvantages of population-based commissioning.

Clients	**Municipalities**
- The main contractor is stimulated to limit effort - Endangerment of freedom of choice	+ Fast process, a low effort for municipalities. - How fixed is the budget? - Little influence/control on execution

Advantages and disadvantages of population-based commissioning (Telgen et al., 2014).

Auction model

If municipalities use the auction model an independent case manager has a conversation with the client and they make a case description (Telgen et al., 2014). This case description is placed on a closed website, where qualified healthcare providers can offer their healthcare plan and corresponding price. Thereafter, the municipality chooses together with the client the plan that best meets the needs of the customer (Telgen et al., 2014). The table below gives an overview of the advantages and disadvantages of the auction model.

Clients	**Municipalities**

+ Clients get a customized care plan + Clients are involved in choosing a healthcare provider - Not involved in the preparation of the care plan	+ Auction mechanism ensure good value for money + Administratively well arranged - A possibility that healthcare providers propose changes during execution

Advantages and disadvantages of the Auction model (Telgen et al., 2014).

Neighborhood teams

In this commissioning model, multidisciplinary teams are formed by the municipality (Telgen et al., 2014). These teams consist of employees of the municipality and providers of general provisions. The neighbourhood teams conduct conversations with clients and compose support plans. In addition, neighbourhood teams strive to do as much as possible themselves. Should professional help be required, clients will be referred to care providers (Telgen et al., 2014). The table below gives an overview of the advantages and disadvantages of neighborhood teams.

Clients	**Municipalities**
+ Recognizable point of contact nearby	+ A lot of influence on the execution through the neighbourhood teams - Who monitors the neighbourhood teams? - Are neighbourhood teams able to correctly diagnose?

Advantages and disadvantages of Neighborhood teams (Telgen et al., 2014).

Appendix II Survey I&O research

1 Toegankelijkheid van voorzieningen (Contact municipality)	Nooit	Soms	Vaak	Altijd	Niet van toepassing
1 Ik weet waar ik terecht kan als ik hulp nodig heb	O	O	O	O	O
2 Ik ben snel geholpen	O	O	O	O	O
3 Ik kan de hulp krijgen die ik nodig heb	O	O	O	O	O
2 Vind je de uitvoering van de zorg goed? (Performance care provider)	Nooit	Soms	Vaak	Altijd	Niet van toepassing
1 Ik word goed geholpen bij mijn vragen en problemen	O	O	O	O	O
2 De verschillende organisaties werken goed samen om mij te helpen	O	O	O	O	O
3 Ik krijg voldoende informatie over de hulp	O	O	O	O	O
4 Beslissingen over de hulp worden samen met mij genomen	O	O	O	O	O
5 De hulpverleners weten genoeg om mij te kunnen helpen	O	O	O	O	O
6 Ik voel mij serieus genomen door de hulpverleners	O	O	O	O	O
7 Ik word met respect behandeld door de hulpverleners	O	O	O	O	O

3 Wat is het effect van de hulp op hoe jij opgroeit? (Effect)	Nee, het is veel slechter geworden	Het is een beetje slechter geworden	Het is hetzelfde gebleven	Het is een beetje beter geworden	JA, het is veel beter geworden	Niet van toepassing
1 Door de hulp voel ik mij beter	O	O	O	O	O	O
2 Door de hulp gaat het beter met mijn gedrag	O	O	O	O	O	O
3 Door de hulp gaat het thuis beter	O	O	O	O	O	O
4 Door de hulp voel ik me veiliger	O	O	O	O	O	O
4 Wat is het effect van de hulp op jouw zelfstandigheid?	Nee, het is veel slechter geworden	Het is een beetje slechter geworden	Het is hetzelfde gebleven	Het is een beetje beter geworden	JA, het is veel beter geworden	Niet van toepassing
5 Door de hulp weet ik beter wat ik wil	O	O	O	O	O	O
6 Door de hulp zeg ik vaker wat ik nodig heb	O	O	O	O	O	O
7 Door de hulp wordt er beter naar mij geluisterd	O	O	O	O	O	O
5 Wat is het effect van de hulp op jouw zelfredzaamheid?	Nee, het is veel slechter geworden	Het is een beetje slechter geworden	Het is hetzelfde gebleven	Het is een beetje beter geworden	JA, het is veel beter geworden	Niet van toepassing
8 Door de hulp kan ik beter mijn problemen oplossen	O	O	O	O	O	O
9 Door de hulp kan ik beter voor mezelf opkomen	O	O	O	O	O	O
10 Door de hulp heb ik meer vertrouwen in de toekomst	O	O	O	O	O	O

6 Wat is het effect op hoe jij mee kan doen in jouw omgeving?	Nee, het is veel slechter geworden	Het is een beetje slechter geworden	Het is hetzelfde gebleven	Het is een beetje beter geworden	JA, het is veel beter geworden	Niet van toepassing
11 Door de hulp gaat het beter op school, werk of dagbesteding	O	O	O	O	O	O
12 Door de hulp besteed ik mijn vrije tijd beter	O	O	O	O	O	O
13 Door de hulp is mijn relatie met vrienden en anderen beter geworden	O	O	O	O	O	O

Algemene vragen

Ik ben een

O Jongen
O Meisje

Wat is je leeftijd?

…….[invulveld]

Waar woon je?

[indeling door de gemeente: kies bijvoorbeeld voor wijk/dorp/postcode]

O Wijk A
O Wijk B
…..
O Wijk Z

Hoe lang krijg je al hulp?

O Korter dan 3 maanden
O Tussen de 3 en 6 maanden
O Tussen de 6 en 12 maanden
O Langer dan een jaar

Appendix III Semi-structured interviews format

Structure
Questions about how the commissioning of youth care is currently organized and what choices have to be made within this process.

1. How is the commissioning of youth care within your region organized at this time?
2. What are the choices that your region must make with regard to commissioning youth care?
3. To what extent is your organization concerned with client satisfaction?
4. How does your organization ensure client satisfaction?
5. What agreements are made with care providers about client satisfaction?

Commissioning aspects
From the literature there are a number of commissioning aspects that are expected to have a direct or indirect influence on client satisfaction in youth care. These aspects will now be discussed separately.

1. Do you expect the duration of a contract to affect client satisfaction and why?
2. Do you expect the possibility of extending the contract to have an impact on client satisfaction and why?
3. Do you expect that the degree of inter-municipal cooperation will affect client satisfaction and why?
4. Do you expect that the extent to which a client is free to choose their preferred provider will influence client satisfaction and why?
5. Do you expect the chosen funding method to affect client satisfaction and why?
6. Do you expect that the degree to which the client is involved in the process will influence client satisfaction and why?
7. Are there any other factors within the commissioning process that you expect will affect client satisfaction?

Appendix IV Informed consent

INFORMED CONSENT FORMULIER

Naam van het onderzoeksproject

Wordt cliënt tevredenheid in de jeugdzorg beïnvloed door de inkoopstrategie van gemeenten?

Doel van het onderzoek
Dit onderzoek wordt geleid door Dirk Koehorst. U bent van harte uitgenodigd om deel te nemen aan dit onderzoek. Het doel van dit onderzoek is om te onderzoeken of bepaalde aspecten van het inkooptraject in de jeugdzorg van invloed zijn op de cliënt tevredenheid.

Gang van zaken tijdens het onderzoek
U neemt deel aan een interview waarin aan u vragen zullen worden gesteld over het inkooptraject van de jeugdzorg en welke keuzes gemeenten hierin moeten maken. Een voorbeeld van een typische vraag die u zal worden gesteld: “Wat zijn keuzes die uw regio moet maken met betrekking tot de inkoop van jeugdzorg?”.

U dient tenminste 16 jaar te zijn om deel te nemen aan dit onderzoek.

Voorafgaand aan het interview vullen alle deelnemers een korte vragenlijst in. Hierin staan onder andere vragen over achtergrondgegevens. Tijdens het interview zal, aan de hand van een topic list, dieper worden ingegaan op het inkooptraject van de jeugdzorg en welke keuzes gemeenten hierin moeten maken. Van het interview zal een audio-opname worden gemaakt, zodat het gesprek later ad-verbum (woord voor woord) kan worden uitgewerkt. Dit transcript wordt vervolgens gebruikt in het verdere onderzoek.

Potentiële risico's en ongemakken

- Er zijn geen fysieke, juridische of economische risico's verbonden aan uw deelname aan deze studie. U hoeft geen vragen te beantwoorden die u niet wilt beantwoorden. Uw deelname is vrijwillig en u kunt uw deelname op elk gewenst moment stoppen.

- Er is mogelijk ongemak verbonden aan uw deelname aan deze studie, vanwege de gevoelige aard van het onderwerp. U hoeft geen vragen te beantwoorden die u niet wilt beantwoorden. Uw deelname is vrijwillig en u kunt uw deelname op elk gewenst moment stoppen.

Vergoeding
U ontvangt voor deelname aan dit onderzoek geen vergoeding . Door deel te nemen aan dit onderzoek zult u meer inzicht krijgen in hoe beslissingen in het inkooptraject van de jeugdzorg de cliënt tevredenheid beïnvloeden. Het bredere doel van dit onderzoek is: om te onderzoeken of gemeenten de cliënt tevredenheid binnen de jeugdzorg kunnen verhogen door bepaalde keuzes te maken tijdens het inkooptraject.

Vertrouwelijkheid van gegevens
Uw privacy is en blijft maximaal beschermd. Er wordt op geen enkele wijze vertrouwelijke informatie of persoonsgegevens van of over u naar buiten gebracht, waardoor iemand u zal kunnen herkennen.

Voordat onze onderzoeksgegevens naar buiten gebracht worden, worden uw gegevens geanonimiseerd. Enkele eenvoudige voorbeelden hiervan:
- uw naam wordt vervangen door anonieme, op zichzelf betekenisloze combinatie van getallen.
- uw leeftijd zelf wordt niet verwerkt, maar in een categorie geplaatst. Bijvoorbeeld: leeftijd: tussen 18-25 jaar / tussen 25-35 jaar etc.
- uw woonplaats wordt niet gebruikt, maar de provincie waarin u woont.

Bij de start van ons onderzoek krijgt uw naam direct een **pseudoniem**; uw naar wordt gepseudonimiseerd ofwel 'versleuteld'. Op deze manier kan wel worden onderzocht wat u in het gesprek aangeeft, maar weten de getrainde onderzoekers niet dat u het bent. De onderzoeksleider is zelf verantwoordelijk voor dit pseudoniem en de sleutel en zal uw gegevens niet delen met anderen.

In een publicatie of presentatie zullen of anonieme gegevens of pseudoniemen worden gebruikt. De audio-opnamen, formulieren en andere documenten die in het kader van deze studie worden gemaakt of verzameld, worden opgeslagen op een beveiligde locatie bij de Universiteit Twente en op de beveiligde (versleutelde) computers van de onderzoekers.

Vrijwilligheid
Deelname aan dit onderzoek is geheel vrijwillig. U kunt als deelnemer uw medewerking aan het onderzoek te allen tijde stoppen, of weigeren dat uw gegevens voor het onderzoek mogen worden gebruikt, zonder opgaaf van redenen.

Dit betekent dat als u voorafgaand aan het onderzoek besluit om af te zien van deelname aan dit onderzoek, dat dit op geen enkele wijze gevolgen voor u zal hebben. Tevens kunt u tot 10 werkdagen (bedenktijd) na het interview alsnog de toestemming intrekken die u heeft gegeven om gebruik te maken van uw gegevens.

In deze gevallen zullen uw gegevens uit onze bestanden worden verwijderd en vernietigd.
Als u tijdens het onderzoek, na de bedenktijd van 10 werkdagen, besluit om uw medewerking te staken, zal dat eveneens op geen enkele wijze gevolgen voor u hebben. Echter: de gegevens die u hebt verstrekt tot aan het moment waarop uw deelname stopt, zal in het onderzoek gebruikt worden, inclusief de bescherming van uw privacy zoals hierboven beschreven. Er worden uiteraard geen nieuwe gegevens verzameld of gebruikt.

Als u besluit om te stoppen met deelname aan het onderzoek, of als u vragen of klachten heeft, of uw bezorgdheid kenbaar wilt maken, of een vorm van schade of ongemak vanwege het onderzoek, neemt u dan aub contact op met de onderzoeksleider: Dirk Koehorst, d.s.koehorst@student.utwente.nl

Toestemmings-verklaring
Met uw ondertekening van dit document geeft aan dat u minstens 16 jaar oud bent; dat u goed bent geïnformeerd over het onderzoek, de manier waarop de onderzoeksgegevens worden verzameld, gebruikt en behandeld en welke eventuele risico's u zou kunnen lopen door te participeren in dit onderzoek

Indien u vragen had, geeft u bij ondertekening aan dat u deze vragen heeft kunnen stellen en dat deze vragen helder en duidelijk zijn beantwoord. U geeft aan dat u vrijwillig akkoord gaat met uw deelname aan dit onderzoek. U ontvangt een kopie van dit ondertekende toestemmingsformulier.

Ik ga akkoord met deelname aan een onderzoeksproject geleid door Dirk Koehorst. Het doel van dit document is om de voorwaarden van mijn deelname aan het project vast te leggen.

1. Ik kreeg voldoende informatie over dit onderzoeksproject. Het doel van mijn deelname als een geïnterviewde in dit project is voor mij helder uitgelegd en ik weet wat dit voor mij betekent.

2. Mijn deelname als geïnterviewde in dit project is vrijwillig. Er is geen expliciete of impliciete dwang voor mij om aan dit onderzoek deel te nemen.

3. Mijn deelname houdt in dat ik word geïnterviewd door een onderzoeker van de Universiteit Twente. Het interview zal ongeveer 30 minuten duren. Ik geef de onderzoeker toestemming om tijdens het interview opnames (geluid / beeld) te maken en schriftelijke notities te nemen. Het is mij duidelijk dat, als ik toch bezwaar heb met een of meer punten zoals hierboven benoemd, ik op elk moment mijn deelname, zonder opgaaf van reden, kan stoppen.

4. Ik heb het recht om vragen niet te beantwoorden. Als ik me tijdens het interview ongemakkelijk voel, heb ik het recht om mijn deelname aan het interview te stoppen.

5. Ik heb van de onderzoeksleider de uitdrukkelijke garantie gekregen dat de onderzoeksleider er zorg voor draagt dat ik niet ben te identificeren in door het onderzoek naar buiten gebrachte gegevens, rapporten of artikelen. Mijn privacy is gewaarborgd als deelnemer aan dit onderzoek.

6. Ik heb de garantie gekregen dat dit onderzoeksproject is beoordeeld en goedgekeurd door de ethische commissie van de BMS Ethics Committee. Voor bezwaren met betrekking tot de opzet en of uitvoering van het onderzoek kan ik me wenden tot de Secretaris van de Ethische Commissie van de faculteit Behavioural, Management and Social Sciences op de Universiteit Twente via ethicscommittee-bms@utwente.nl.

7. Ik heb dit formulier gelezen en begrepen. Al mijn vragen zijn naar mijn tevredenheid beantwoord en ik ben vrijwillig akkoord met deelname aan dit onderzoek.

8. Ik heb een kopie ontvangen van dit toestemmingsformulier dat ook ondertekend is door de interviewer.

_____	_____	_____
Naam deelnemer	Handtekening	Datum

_____	_____	_____
Naam Onderzoeker	Handtekening	Datum

Appendix V Exploratory factor analysis

Variable (question)	Factor 1	Factor 2	Initial communality	Extraction communality
Effect_1	0,76	0,34	1,00	0,69
Effect_2	0,80	0,25	1,00	0,70
Effect_3	0,75	0,20	1,00	0,61
Effect_4	0,79	0,27	1,00	0,70
Effect_5	0,79	0,19	1,00	0,67
Effect_6	0,78	0,19	1,00	0,64
Effect _7	0,76	0,29	1,00	0,67
Effect _8	0,72	0,24	1,00	0,58
Effect _9	0,73	0,13	1,00	0,54
Effect _10	0,78	0,14	1,00	0,63
Effect _11	0,77	0,18	1,00	0,63
Effect _12	0,79	0,17	1,00	0,65
Effect _13	0,81	0,23	1,00	0,72
Performance_1	0,25	0,79	1,00	0,69
Performance _2	0,20	0,76	1,00	0,62
Performance _3	0,23	0,77	1,00	0,65
Performance _4	0,17	0,79	1,00	0,65
Performance _5	0,26	0,81	1,00	0,73
Performance _6	0,23	0,85	1,00	0,77
Performance _7	0,18	0,80	1,00	0,68

Table 8. Rotated Component Matrix [5].

The table shows that the EFA identifies two factors. Loadings close to 1 or -1 indicate that the factor greatly influences the variable. Loadings that are close to zero indicate the opposite. Effect_1 through Effect_13 have large positive loadings on factor 1, so this factor describes the effects experienced by the client. Performance_1 through Performance_7 have large positive loadings on factor 2, so this factor describes the performance of the care provider. In addition, table 7 provides the initial and extraction communality for each variable. Initial and extraction communalities are both are approximations of the variance in each variable. However, the variance in initial communalities is accounted for by all factors, where the variance in extraction communalities is accounted for by the factors in the factor solution. The communality score shows the extent to which a variable correlates with all other factors. The higher the communality the stronger the correlation. The communalities are relatively high for all of the variables. This indicates that all the variables are well defined by the two factors.

[5] Extraction Method: Principal Components Analysis (PCA)
Rotation Method: Varimax with Kaiser Normalization
a. Rotation converged in 3 iterations.

Appendix VI Scatterplot of the relation between age and client satisfaction.